



# **STIC Search Report**

**EIC 1700**

**STIC Database Tracking Number: 195419**

**TO: Shailendra Kumar**  
**Location: REM/5C03/5C18**  
**Art Unit : 1621**  
**July 21, 2006**

**Case Serial Number: 10/817640**

**From: Usha Shrestha**  
**Location: EIC 1700**  
**REMSSEN 4B28**  
**Phone: 571/272-3519**  
**usha.shrestha@uspto.gov**

## **Search Notes**

FOR OFFICIAL USE ONLY

Scientific and Technical Information Center

SEARCH REQUEST FORM

Requester's Full Name: S. Kumar Examiner #: 10/817640 Date: 7/12/06  
Art Unit: 1621 Phone Number: 2-0640 Serial Number: 10/817640  
Location (Bldg/Room#): 5C03 (Mailbox #): 5C18 Results Format Preferred (circle): PAPER DISK  
\*\*\*\*\*

To ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following:

Title of Invention: Branched Primary Alcohol compositions and derivatives  
Inventors (please provide full names): Charles Lee Edwards et al.

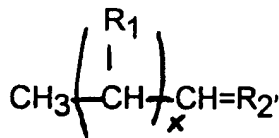
Earliest Priority Date: 12/21/00

Search Topic:

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known.

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

-- A process to produce branched alkyl ether sulfate composition  
comprising: a) contacting an olefin composition having an average carbon number in the range of 3 to 18 having the formula



where R<sub>1</sub> represents hydrogen or a hydrocarbyl group having from 1 to 3 carbon atoms,

R<sub>2</sub> represents a hydrocarbyl group having from 1 to 7 carbon atoms where the linkage

with the CH group is by double bond, and x is a number ranging from 0 to 16, with 1,3-

propane diol in the presence of a catalyst effective to react the olefin with the diol under

conditions effective to produce the branched alcohol composition; and

b) contacting the branched alcohol composition with a sulfating agent under conditions effective to produce a branched alkyl ether sulfate composition.

=> fil reg

FILE 'REGISTRY' ENTERED AT 13:36:34 ON 21 JUL 2006

=> d his ful

FILE 'HCAPLUS' ENTERED AT 11:35:09 ON 21 JUL 2006

L1 1 SEA ABB=ON US20040198628/PN  
SEL RN

FILE 'REGISTRY' ENTERED AT 11:35:43 ON 21 JUL 2006

L2 14 SEA ABB=ON (112-41-4/BI OR 1120-36-1/BI OR 23377-40-4/  
BI OR 439293-82-0/BI OR 439293-83-1/BI OR 439293-84-2/B  
I OR 439293-85-3/BI OR 439293-86-4/BI OR 439293-87-5/BI  
OR 504-63-2/BI OR 629-73-2/BI OR 7790-94-5/BI OR  
81749-13-5/BI OR 84337-56-4/BI)  
L3 STR

FILE 'CASREACT' ENTERED AT 11:43:15 ON 21 JUL 2006

L4 STR L3  
L5 1 SEA SSS SAM L4 ( 95 REACTIONS)

FILE 'REGISTRY' ENTERED AT 11:46:56 ON 21 JUL 2006

L6 STR  
L7 50 SEA SSS SAM L6  
L8 SCR 2043  
L9 50 SEA SSS SAM L6 NOT L8  
L10 STR L6  
L11 20 SEA SSS SAM L10 NOT L8  
L12 SCR 1838 OR 1992  
L13 21 SEA SSS SAM L10 NOT (L8 OR L12)

FILE 'CASREACT' ENTERED AT 12:15:30 ON 21 JUL 2006

L14 STR L10  
L15 1 SEA SSS SAM L14 ( 14 REACTIONS)  
L16 STR L14  
L17 1 SEA SSS SAM L16 ( 14 REACTIONS)

FILE 'REGISTRY' ENTERED AT 12:43:03 ON 21 JUL 2006

L18 STR L16  
L19 STR L16  
L20 STR L19  
L21 31 SEA SSS SAM L20 NOT (L8 OR L12)  
L22 590 SEA SSS FUL L20 NOT (L8 OR L12)  
L23 3 SEA ABB=ON L2 AND L22  
SAV L22 KUM640/A

FILE 'CASREACT' ENTERED AT 12:59:58 ON 21 JUL 2006

L24 STR L19  
L25 0 SEA SSS SAM L24 ( 0 REACTIONS)  
L26 5 SEA SSS FUL L24 ( 9 REACTIONS)

FILE 'HCAPLUS' ENTERED AT 13:03:37 ON 21 JUL 2006

L27 704 SEA ABB=ON L22  
L28 269 SEA ABB=ON L27 AND DETERG?/SC,SX  
L29 35 SEA ABB=ON L27(L) PREP/RL  
L30 214 SEA ABB=ON L28 AND SURFACT?  
L31 111 SEA ABB=ON L30 AND (PROCESS? OR METHOD? OR SYNTHES?  
OR PRODUC? OR PREP?)  
L32 4 SEA ABB=ON L31 AND DIOL?

FILE 'REGISTRY' ENTERED AT 13:10:44 ON 21 JUL 2006  
L33 1 SEA ABB=ON 504-63-2/RN

FILE 'HCAPLUS' ENTERED AT 13:11:18 ON 21 JUL 2006  
L34 5239 SEA ABB=ON L33  
L35 1 SEA ABB=ON L27 AND L34  
L36 1 SEA ABB=ON L23  
L37 38 SEA ABB=ON L29 OR L32 OR (L35 OR L36)  
L38 23 SEA ABB=ON L31 AND SOLUB?  
L39 55 SEA ABB=ON L37 OR L38  
L40 50 SEA ABB=ON L39 AND (1840-2000)/PRY,AY,PY

=> d que 126

L24 STR

PRO

HO3SO~~~~Ak~~O~~~~G1~~Ak Ak~~O  
1 2 3 4 5 @6 @7

REP G1=(0-5) 6-3 7-5

NODE ATTRIBUTES:

CONNECT IS E2 RC AT 2

CONNECT IS E1 RC AT 5

CONNECT IS E2 RC AT 6

DEFAULT MLEVEL IS ATOM

GGCAT IS SAT AT 2

GGCAT IS SAT AT 5

GGCAT IS SAT AT 6

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE

L26 5 SEA FILE=CASREACT SSS FUL L24 ( 9 REACTIONS)

=> fil casreact

FILE 'CASREACT' ENTERED AT 13:37:08 ON 21 JUL 2006

=> d l26 1-5 ibib abs fhit

L26 ANSWER 1 OF 5 CASREACT COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 141:395586 CASREACT

TITLE: Method for the production of ionic liquids  
containing alkyl sulphate and functionalized  
alkyl sulphate-anions

INVENTOR(S): Wasserscheid, Peter; Van Hal, Roy; Hilgers,  
Claus

PATENT ASSIGNEE(S): Solvent Innovation G.m.b.H., Germany

SOURCE: PCT Int. Appl., 22 pp.

CODEN: PIXXD2

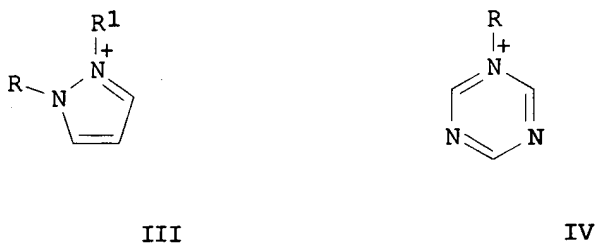
DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 2

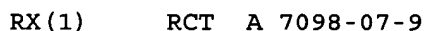
## PATENT INFORMATION:

| PATENT NO.             | KIND                                                                                                                                                                                                                                                                                                                                                                                       | DATE              | APPLICATION NO.  | DATE     |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------------------|----------|
| WO 2004096776          | A1                                                                                                                                                                                                                                                                                                                                                                                         | 20041111          | WO 2004-EP50619  | 20040427 |
| W:                     | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |                   |                  |          |
| RW:                    | BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG                                                                                                                 |                   |                  |          |
| DE 10319465            | A1                                                                                                                                                                                                                                                                                                                                                                                         | 20041118          | DE 2003-10319465 | 20030429 |
| EP 1622877             | A1                                                                                                                                                                                                                                                                                                                                                                                         | 20060208          | EP 2004-741484   | 20040427 |
| R:                     | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK                                                                                                                                                                                                                                                                             |                   |                  |          |
| US 2006063945          | A1                                                                                                                                                                                                                                                                                                                                                                                         | 20060323          | US 2005-261941   | 20051028 |
| PRIORITY APPLN. INFO.: |                                                                                                                                                                                                                                                                                                                                                                                            |                   | DE 2003-10319465 | 20030429 |
|                        |                                                                                                                                                                                                                                                                                                                                                                                            |                   | WO 2004-EP50619  | 20040427 |
| OTHER SOURCE(S):       |                                                                                                                                                                                                                                                                                                                                                                                            | MARPAT 141:395586 |                  |          |
| GI                     |                                                                                                                                                                                                                                                                                                                                                                                            |                   |                  |          |



AB The invention relates to a method for the production of ionic liqs. of general formula [cation][R'<sup>0</sup>-S03]<sup>-</sup>, [cation = +NR<sub>1</sub>R<sub>2</sub>R<sub>3</sub>, +PR<sub>1</sub>R<sub>2</sub>R<sub>3</sub>, I, II, III, IV; R' = R<sub>4</sub>{X(CH<sub>2</sub>)<sub>n</sub>}<sub>m</sub>; n = 1 - 400; X = O, S, Se, bond, OSiMe<sub>2</sub>O, OSiEt<sub>2</sub>O, OSi(OMe)<sub>2</sub>O, OSi(OEt)<sub>2</sub>O, PPh, PR''; R<sub>4</sub> = (un)branched, (un)saturated C1-36-aliphatic, alicyclic (optionally substituted with OH, OR'', CO<sub>2</sub>H, CO<sub>2</sub>R'', NH<sub>2</sub>, SO<sub>4</sub>, F, Cl, Br, I, CN); R'' = (un)branched C1-12-alkyl; R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> = H, (un)branched, (un)saturated C1-20-aliphatic, alicyclic, heteroaryl,

RX (1) OF 4            A + B + C ==> D



CON · room temperature

CON overnight, room temperature

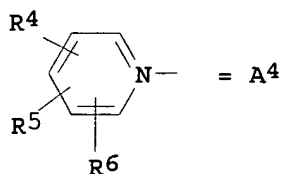
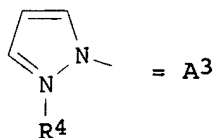
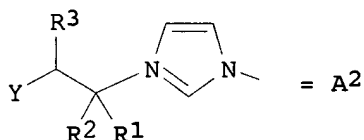
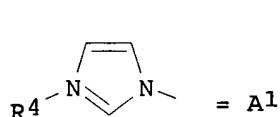
CON 5 hours, 160 deg C

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

TITLE: Procedures for the production of new, functionalized ionic liquids

INVENTOR(S):                   Wasserscheid, Peter; Driessen-Hoelscher,  
 Birgit; Steffens, Christian; Hilgers, Claus  
 PATENT ASSIGNEE(S):       Solvent Innovation G.m.b.H., Germany  
 SOURCE:                   Ger. Offen., 15 pp.  
                               CODEN: GWXXBX  
 DOCUMENT TYPE:            Patent  
 LANGUAGE:                 German  
 FAMILY ACC. NUM. COUNT:  1  
 PATENT INFORMATION:

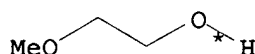
| PATENT NO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | KIND | DATE     | APPLICATION NO.  | DATE     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|------------------|----------|
| DE 10247578                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | A1   | 20040422 | DE 2002-10247578 | 20021013 |
| WO 2004035542                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | A1   | 20040429 | WO 2003-EP11306  | 20031013 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA,<br>CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES,<br>FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,<br>KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,<br>MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO,<br>RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ,<br>UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW<br>RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM,<br>AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ,<br>DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL,<br>PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN,<br>GQ, GW, ML, MR, NE, SN, TD, TG |      |          |                  |          |
| AU 2003278072                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | A1   | 20040504 | AU 2003-278072   | 20031013 |
| PRIORITY APPLN. INFO.:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |      |          | DE 2002-10247578 | 20021013 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |          | WO 2003-EP11306  | 20031013 |
| OTHER SOURCE(S):           MARPAT 140:357341                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |      |          |                  |          |
| GI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |      |          |                  |          |



AB This invention refers to new ionic liqs., [R1R2C(A)CH(Y)R3]+X- [I;  
 A = NR4R5R6, R3CH(Y)CR1R2NR4R5, PR4R5R6, R3CH(Y)CR1R2PR4R5, A1,  
 A2, A3, A4; X- = PF6-, BF4-, CF3CO2-, CF3SO3-, (CF3SO2)2N-,  
 (CF3SO2)(CF3CO)N-, R7SO3, R7OSO3-, R7CO2-, Cl-, Br-, I-, NO3-,  
 CN-, HSO4-, R7R8PO4-; R1 - R7 = H, (un)branched, (un)saturated  
 C1-20-alkyl, C1-20-cycloalkyl, heteroaryl, heteroaryl-(C1-6-alkyl)  
 (3-8 carbons in heterocycle also containing O, N and/or S); aryl,

aryl(C1-6-alkyl) (with 5 -12 carbons in the aryl residue); Y = COR9, CO2R9, OC(:O)R9, OR9, CONH2, CN, CONHR9, CONR9R10, NHR9, NR9R10; R9, R10 = H, (un)branched, (un)saturated C1-20-alkyl, C1-20-cycloalkyl, heteroaryl-(C1-6-alkyl) (3-8 carbons in heterocycle also containing O, N and/or S), aryl, aryl(C1-6-alkyl) (with 5 -12 carbons in the aryl residue), etc.], with functionalized N-alkyl and P-alkyl groups as well as to a new procedure for its production in a very efficient and economical way. The invention also refers to the preparation of I via reaction of acrylic compds.,  $R1R2C:C(Y)R3$ , with amines, phosphanes, imidazoles, pyrazoles or pyridines in the presence of an acid. Thus, 1-(2-cyanoethyl)-3-butylimidazolium tetrafluoroborate was prepared from 1-butylimidazolium tetrafluoroborate via reaction with acrylonitrile in the presence of pyridine and hydroquinone. These new ionic liqs. can e.g. as solvents and/or solvent addns. in chemical reactions, when extractant or as heat distribution media are used.

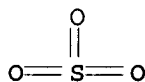
RX(2) OF 4      F + G + B ==> H



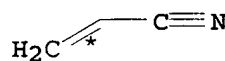
F



G: CM 1

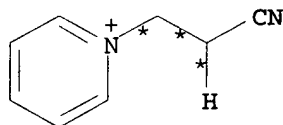


G: CM 2

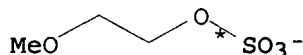


B

(2) →



H: CM 1  
YIELD 100%



H: CM 2  
YIELD 100%

RX(2)      RCT F 109-86-4, G 26412-87-3

STAGE(1)

CON 3 hours, room temperature

STAGE(2)

RCT B 107-13-1

CON SUBSTAGE(1) 18 hours, 70 deg C

SUBSTAGE(2) 2 hours, 50 deg C

PRO H 681164-11-4

L26 ANSWER 3 OF 5 CASREACT COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 140:16684 CASREACT

TITLE: New, functionalized ionic liquids from Michael-type reactions - a chance for combinatorial ionic liquid development

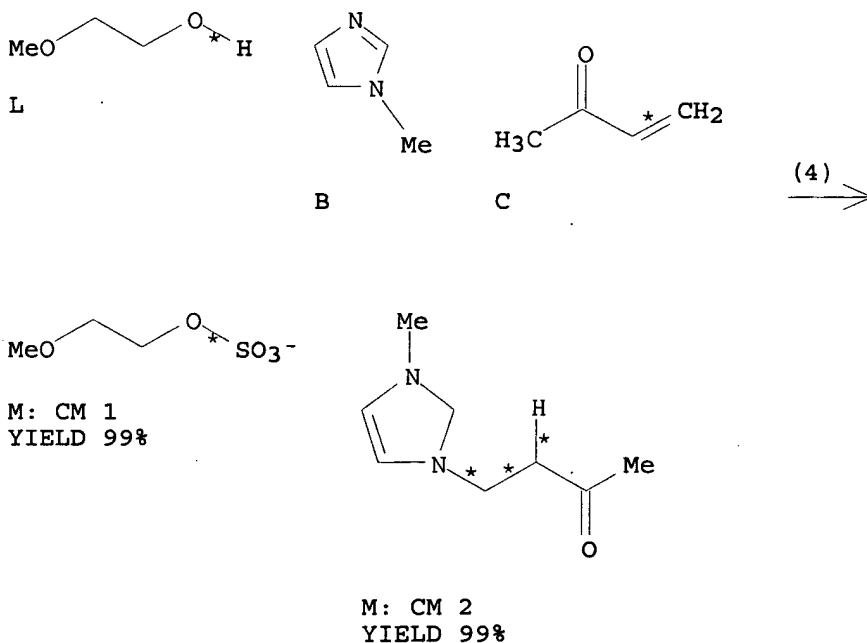
AUTHOR(S): Wasserscheid, Peter; Driessen-Hoelscher,



Birgit; van Hal, Roy; Steffens, H. Christian;  
 Zimmermann, Joerg  
 CORPORATE SOURCE: Institut fuer Technische Chemie und  
 Makromolekulare Chemie, RWTH Aachen, Aachen,  
 52074, Germany  
 SOURCE: Chemical Communications (Cambridge, United  
 Kingdom) (2003), (16), 2038-2039  
 CODEN: CHCOFS; ISSN: 1359-7345  
 PUBLISHER: Royal Society of Chemistry  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB The authors describe for the first time an alternative and far  
 more efficient method to synthesize functionalized ionic liqs. in  
 a simple, straightforward, two-step synthesis. E.g, addition of  
 N-methylimidazole to p-toluenesulfonic acid monohydrate, followed  
 by addition of Me vinyl ketone, gave the ionic liquid  
 1-methyl-3-(3-oxobutyl)imidazolium 4-toluenesulfonate.

RX(4) OF 8 L + B + C ==> M



RX(4) RCT L 109-86-4

STAGE(1)

RGT N 26412-87-3 Pyridine-SO<sub>3</sub> (1:1)  
 CON 2 hours, 80 deg C

STAGE(2)

RCT B 616-47-7  
 CON room temperature

STAGE(3)

RCT C 78-94-4

CON overnight, room temperature

PRO M 630393-18-9

NTE combinatorial, product is ionic liq., no solvent

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L26 ANSWER 4 OF 5 CASREACT COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 133:207590 CASREACT

TITLE: Preparation of sulfuric acid esters for  
anionic surfactants

INVENTOR(S): Yamamoto, Goro

PATENT ASSIGNEE(S): Asahi Denka Kogyo K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

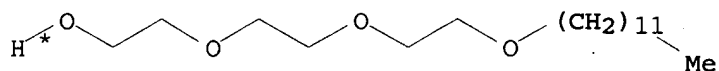
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

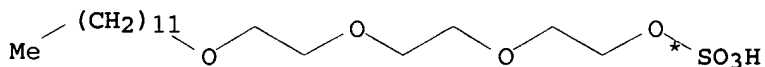
| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE     |
|------------------------|------|----------|-----------------|----------|
| JP 2000247947          | A2   | 20000912 | JP 1999-52276   | 19990301 |
| PRIORITY APPLN. INFO.: |      |          | JP 1999-52276   | 19990301 |

AB Title compds. are prepared by reaction of hydroxy compds. with  
0.5-1.5 mol H<sub>2</sub>SO<sub>4</sub> per 1 mol OH group as 10-99 weight% aqueous solution  
Triethylene glycol lauryl ether (1 mol) was reacted with 1.1 mol  
H<sub>2</sub>SO<sub>4</sub> (50% aqueous solution) at 20-30° under 5-50 mmHg for 4 h to  
give triethylene glycol lauryl ether sulfate at 96% conversion.,  
which was treated with NaOH to give Na salt with Gardner color number  
1.

RX(1) OF 3 A ==&gt; B



A



B

RX(1) RCT A 3055-94-5

## STAGE(1)

RGT C 7664-93-9 H<sub>2</sub>SO<sub>4</sub>  
 SOL 7732-18-5 Water

## STAGE(2)

RGT D 1310-73-2 NaOH

PRO B 13150-00-0

NTE 20-30° and 5-10 mmHg

L26 ANSWER 5 OF 5 CASREACT COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 111:41842 CASREACT

TITLE: Sulfated hydroxyalkyl ethers of alkoxyated alcohols and their preparation and use

INVENTOR(S): Schenker, Gilbert; Piorr, Robert; Luettge, Sabine

PATENT ASSIGNEE(S): Henkel K.-G.a.A., Fed. Rep. Ger.

SOURCE: Eur. Pat. Appl., 22 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

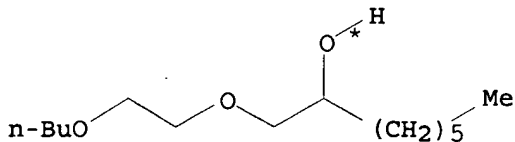
## PATENT INFORMATION:

| PATENT NO.                                        | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------------------------------------------|------|----------|-----------------|----------|
| EP 299370                                         | A2   | 19890118 | EP 1988-110904  | 19880708 |
| EP 299370                                         | A3   | 19900516 |                 |          |
| EP 299370                                         | B1   | 19940831 |                 |          |
| R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, NL, SE |      |          |                 |          |
| DE 3723354                                        | A1   | 19890126 | DE 1987-3723354 | 19870715 |
| US 4931218                                        | A    | 19900605 | US 1988-218719  | 19880713 |
| JP 01038056                                       | A2   | 19890208 | JP 1988-177963  | 19880715 |
| PRIORITY APPLN. INFO.:                            |      |          | DE 1987-3723354 | 19870715 |

OTHER SOURCE(S): MARPAT 111:41842

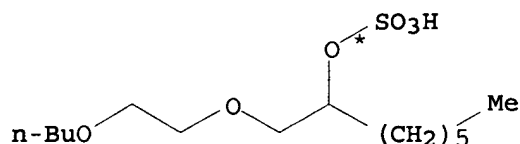
AB Compds. R<sub>1</sub>CH(OSO<sub>3</sub>M)CHR<sub>3</sub>(OCHR<sub>4</sub>CH<sub>2</sub>)nOR<sub>2</sub> (R<sub>1</sub> = linear C<sub>1</sub>-16 alkyl; R<sub>2</sub> = linear or branched C<sub>1</sub>-22 alkyl; R<sub>3</sub> = H, linear C<sub>1</sub>-16 alkyl; R<sub>4</sub> = H, Me; M = H, alkali metal, ammonium, etc.) are prepared by sulfating compds. R<sub>1</sub>CH(OH)CHR<sub>3</sub>(OCHR<sub>4</sub>CH<sub>2</sub>)nOR<sub>2</sub> which are prepared from epoxyalkanes and alkoxyated H(OCHR<sub>4</sub>CH<sub>2</sub>)nOR<sub>2</sub>. The compds. are biodegradable and useful as low-foaming wetting agents and detergent components. A reaction product of 1 mol 1,2-epoxyoctane and 1 mol 10:1 (mol) ethylene oxide-BuOH adduct was sulfated to prepare a surfactant.

RX(2) OF 3 ...D ==> E



D

(2) →



E

RX(2) RCT D 120928-99-6  
PRO E 131707-97-6

=&gt; d que 140

L2 14 SEA FILE=REGISTRY ABB=ON (112-41-4/BI OR 1120-36-1/BI  
OR 23377-40-4/BI OR 439293-82-0/BI OR 439293-83-1/BI  
OR 439293-84-2/BI OR 439293-85-3/BI OR 439293-86-4/BI  
OR 439293-87-5/BI OR 504-63-2/BI OR 629-73-2/BI OR  
7790-94-5/BI OR 81749-13-5/BI OR 84337-56-4/BI)  
L8 SCR 2043  
L12 SCR 1838 OR 1992  
L20 STR

HO3SO~~~~Ak~~O~~~~G1~~Ak  
1 2 3 4 5                      Ak~~O  
                                 @6 @7

REP G1=(0-5) 6-3 7-5

NODE ATTRIBUTES:

CONNECT IS E2 RC AT 2

CONNECT IS E1 RC AT 5

CONNECT IS E2 RC AT 6

DEFAULT MLEVEL IS ATOM

GGCAT IS SAT AT 2

GGCAT IS SAT AT 5

GGCAT IS SAT AT 6

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE

L22 590 SEA FILE=REGISTRY SSS FUL L20 NOT (L8 OR L12)

L23 3 SEA FILE=REGISTRY ABB=ON L2 AND L22

L27 704 SEA FILE=HCAPLUS ABB=ON L22

L28 269 SEA FILE=HCAPLUS ABB=ON L27 AND DETERG?/SC,SX

L29 35 SEA FILE=HCAPLUS ABB=ON L27 (L) PREP/RL

L30 214 SEA FILE=HCAPLUS ABB=ON L28 AND SURFACT?

L31 111 SEA FILE=HCAPLUS ABB=ON L30 AND (PROCESS? OR METHOD?  
OR SYNTHES? OR PRODUC? OR PREP?)

L32 4 SEA FILE=HCAPLUS ABB=ON L31 AND DIOL?

L33 1 SEA FILE=REGISTRY ABB=ON 504-63-2/RN

L34 5239 SEA FILE=HCAPLUS ABB=ON L33

L35 1 SEA FILE=HCAPLUS ABB=ON L27 AND L34

L36 1 SEA FILE=HCAPLUS ABB=ON L23  
 L37 38 SEA FILE=HCAPLUS ABB=ON L29 OR L32 OR (L35 OR L36)  
 L38 23 SEA FILE=HCAPLUS ABB=ON L31 AND SOLUB?  
 L39 55 SEA FILE=HCAPLUS ABB=ON L37 OR L38  
 L40 50 SEA FILE=HCAPLUS ABB=ON L39 AND (1840-2000)/PRY,AY,PY

=> fil hcap

FILE 'HCAPLUS' ENTERED AT 13:37:42 ON 21 JUL 2006

=> d l40 1-50 ibib abs hitstr hitind

L40 ANSWER 1 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:606540 HCAPLUS

DOCUMENT NUMBER: 137:159000

TITLE: Cleaning compositions containing anionic  
**surfactants**

INVENTOR(S): Fukamachi, Takeshi; Nagai, Kunio

PATENT ASSIGNEE(S): Sanyo Chemical Industries, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE         |
|---------------|------|----------|-----------------|--------------|
| -----         | ---- | -----    | -----           |              |
| JP 2002226889 | A2   | 20020814 | JP 2001-365474  | 2001<br>1130 |

PRIORITY APPLN. INFO.: <-- JP 2000-365085 A  
 2000  
 1130

AB Cleaning compns. contain  $\geq 2$  different types of anionic  
**surfactants** selected from sulfate ester salts of aliphatic  
 alc.-alkylene oxide adducts having specific compns. and mol. wts.,  
 sulfosuccinic acid ester salts, ether carboxylic acid salts, and  
 phosphoric acid ester salts. Thus, a shampoo contained diethylene  
 glycol lauryl ether sulfate Na salt 7, diethylene glycol lauryl  
 ether monomaleate sulfonate salt 3, polyethylene glycol lauryl  
 ether sulfosuccinate di-Na salt 5, a coco fatty acid  
 diethanolamide 3, polyethylene glycol **dioleate**  
 methylglucoside 2, glycerin 3, cationic cellulose 1, EDTA Na salt  
 0.05, and water to 100 parts.

IT 3088-31-1P

(cleaning compns. for shampoo containing anionic  
**surfactants**)

RN 3088-31-1 HCAPLUS

CN Ethanol, 2-[2-(dodecyloxy)ethoxy]-, hydrogen sulfate, sodium salt  
 (7CI, 8CI, 9CI) (CA INDEX NAME)

Me- (CH<sub>2</sub>)<sub>11</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

- IC ICM C11D001-29
- ICS A61K007-075; A61K007-50; C11D001-06; C11D001-28; C11D001-34;  
C11D001-72; C11D003-20; C11D003-37; C11D003-40; C11D003-48;  
C11D003-50
- CC 62-3 (Essential Oils and Cosmetics)  
Section cross-reference(s): 46
- ST anionic **surfactant** cleaning compn shampoo
- IT Glycosides  
(Me; cleaning compns. for shampoo containing anionic  
**surfactants**)
- IT Alcohols, **preparation**  
(alkoxylated, sulfates; cleaning compns. for shampoo containing  
anionic **surfactants**)
- IT Polyoxyalkylenes, **preparation**  
(alkyl group-terminated, sulfates; cleaning compns. for shampoo  
containing anionic **surfactants**)
- IT **Surfactants**  
(amphoteric; cleaning compns. for shampoo containing anionic  
**surfactants**)
- IT **Surfactants**  
(anionic; cleaning compns. for shampoo containing anionic  
**surfactants**)
- IT **Surfactants**  
(cationic; cleaning compns. for shampoo containing anionic  
**surfactants**)
- IT Shampoos  
Sulfonation  
(cleaning compns. for shampoo containing anionic  
**surfactants**)
- IT Amides, uses  
(coco; cleaning compns. for shampoo containing anionic  
**surfactants**)
- IT Amides, uses  
(fatty; cleaning compns. for shampoo containing anionic  
**surfactants**)
- IT Polyoxyalkylenes, **preparation**  
(mono(alkyl group)-terminated, sulfates; cleaning compns. for  
shampoo containing anionic **surfactants**)
- IT **Surfactants**  
(nonionic; cleaning compns. for shampoo containing anionic  
**surfactants**)
- IT 10034-81-8, Magnesium perchlorate  
(cleaning compns. for shampoo containing anionic  
**surfactants**)
- IT 3055-93-4P, Diethylene glycol lauryl ether  
(cleaning compns. for shampoo containing anionic  
**surfactants**)
- IT 3088-31-1P 9002-92-0P, Polyethylene glycol lauryl ether  
37311-00-5P 38975-04-1P 68935-84-2P 78325-68-5DP, salts  
(cleaning compns. for shampoo containing anionic  
**surfactants**)
- IT 75-21-8, Ethylene oxide, reactions 75-56-9, Propylene oxide,

reactions 112-53-8, Lauryl alcohol 3926-62-3, Sodium monochloroacetate 7664-38-2, Phosphoric acid, reactions 7757-83-7, Sodium sulfite 7790-94-5, Chlorosulfonic acid (cleaning compns. for shampoo containing anionic surfactants)

IT 107-68-6D, Methyltaurine, derivs. 111-42-2D, Diethanolamine, fatty amides 141-43-5D, Monoethanolamine, fatty amides 683-10-3, Lauryldimethylaminoacetic acid betaine 7003-12-5 36574-66-0D, fatty amides 59149-04-1D, N-Carboxymethyl-N-hydroxyethylimidazolinium betaine, alkyl derivative 79591-34-7 97372-61-7 104365-77-7 145429-49-8 (cleaning compns. for shampoo containing anionic surfactants)

L40 ANSWER 2 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:487507 HCAPLUS

DOCUMENT NUMBER: 137:64930

TITLE: Branched primary alcohol compositions and derivatives, their preparation for detergents

INVENTOR(S): Edwards, Charles Lee; Raney, Kirk Herbert; Shpakoff, Paul Gregory

PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij BV, Neth.

SOURCE: PCT Int. Appl., 61 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE         |
|---------------|------|----------|-----------------|--------------|
| WO 2002050006 | A2   | 20020627 | WO 2001-EP15143 | 2001<br>1220 |

<--

WO 2002050006 A3 20021107

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

|               |    |          |               |              |
|---------------|----|----------|---------------|--------------|
| US 2002151738 | A1 | 20021017 | US 2001-25080 | 2001<br>1219 |
|---------------|----|----------|---------------|--------------|

<--

|            |    |          |                 |              |
|------------|----|----------|-----------------|--------------|
| US 6706931 | B2 | 20040316 |                 |              |
| CA 2432425 | AA | 20020627 | CA 2001-2432425 | 2001<br>1220 |

<--

|               |    |          |               |  |
|---------------|----|----------|---------------|--|
| AU 2002034597 | A5 | 20020701 | AU 2002-34597 |  |
|---------------|----|----------|---------------|--|

2001  
1220

EP 1343861                      A2            20030917            EP 2001-985430

2001  
1220

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,  
MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR  
BR 2001016456                      A            20031007            BR 2001-16456

2001  
1220

JP 2004520311                      T2            20040708            JP 2002-551508

2001  
1220

NZ 526377                              A            20041224            NZ 2001-526377

2001  
1220

ZA 2003004708                      A            20040505            ZA 2003-4708

2003  
0618

US 2004067867                      A1            20040408            US 2003-678889

2003  
1003

US 2004068133                      A1            20040408            US 2003-679174

2003  
1003

US 6909020                              B2            20050621  
US 2004073055                      A1            20040415            US 2003-679126

2003  
1003

US 6891056                              B2            20050510  
US 2004077894                      A1            20040422            US 2003-679120

2003  
1003

US 7071364                              B2            20060704  
US 2004198628                      A1            20041007            US 2004-817640

2004  
0402

PRIORITY APPLN. INFO.:                      US 2000-257670P            P

2000  
1221

US 2001-25080                      A3

2001  
1219

WO 2001-EP15143                      W

2001  
1220



US 2003-679174

A3

2003

1003

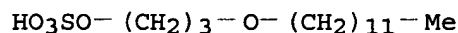
OTHER SOURCE(S): MARPAT 137:64930

AB A branched alc. composition comprising a branched ether primary alc.  $\text{Me}(\text{CHR1})_x\text{CHR2O}(\text{CH}_2)_3\text{OH}$  where  $\text{R1} = \text{H}$  or a hydrocarbyl radical having 1-3 C atoms,  $\text{R2} =$  hydrocarbyl radical having 1-7 C atoms,  $x = 0-16$ , where the total number of C atoms in the alc. is 9-24; and alkyl ether sulfate, alc. alkoxysulfate, and alkanol alkoxylate derivs. are useful in detergent compns. Thus, 0.6 mol of 1-dodecene and 1.8 mol of 1,3-propanediol and 0.024 mol of toluenesulfonic acid monohydrate were heated to  $150^\circ$  for 4 h, and give a 2 phase mixture from which was separated 3-dodecyloxy-1-propanol (I), selectivity to I was 97%, which was reacted with chlorosulfonic acid (0.7 mol) to give an anionic surfactant having critical micelle concentration ( $25^\circ$ ) 0.062 and surface tension 28 dynes/cm.

IT 439293-82-0P 439293-83-1P 439293-84-2P  
(branched primary alc. compns. and derivs. for surfactants with good cold water solubility and high Ca tolerance)

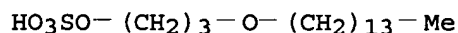
RN 439293-82-0 HCAPLUS

CN 1-Propanol, 3-(dodecyloxy)-, hydrogen sulfate (9CI) (CA INDEX NAME)



RN 439293-83-1 HCAPLUS

CN 1-Propanol, 3-(tetradecyloxy)-, hydrogen sulfate (9CI) (CA INDEX NAME)



RN 439293-84-2 HCAPLUS

CN 1-Propanol, 3-[3-(hexadecyloxy)propoxy]-, hydrogen sulfate (9CI) (CA INDEX NAME)



IT 504-63-2, 1,3-Propanediol  
(branched primary alc. compns. and derivs. for surfactants with good cold water solubility and high Ca tolerance)

RN 504-63-2 HCAPLUS

CN 1,3-Propanediol (8CI, 9CI) (CA INDEX NAME)



IC ICM C07C043-00

CC 46-3 (Surface Active Agents and Detergents)  
Section cross-reference(s): 23

ST **surfactant** branched primary alc alkoxylate; sulfate  
branched primary alc ether

IT **Surfactants**  
(anionic; branched primary alc. compns. and derivs. for  
**surfactants** with good cold water **solubility** and  
high Ca tolerance)

IT **Detergents**  
(branched primary alc. compns. and derivs. for  
**surfactants** with good cold water **solubility** and  
high Ca tolerance)

IT **Alkenes, reactions**  
(branched primary alc. compns. and derivs. for  
**surfactants** with good cold water **solubility** and  
high Ca tolerance)

IT **Surfactants**  
(nonionic; branched primary alc. compns. and derivs. for  
**surfactants** with good cold water **solubility** and  
high Ca tolerance)

IT **Alcohols, preparation**  
(primary, branched; branched primary alc. compns. and derivs.  
for **surfactants** with good cold water **solubility**  
and high Ca tolerance)

IT 439293-82-0P 439293-83-1P 439293-84-2P  
439293-85-3P 439293-86-4P 439293-87-5P  
(branched primary alc. compns. and derivs. for  
**surfactants** with good cold water **solubility** and  
high Ca tolerance)

IT 23377-40-4P 81749-13-5P 84337-56-4P  
(branched primary alc. compns. and derivs. for  
**surfactants** with good cold water **solubility** and  
high Ca tolerance)

IT 112-41-4, 1-Dodecene 504-63-2, 1,3-Propanediol  
629-73-2, NEODENE 16 1120-36-1, NEODENE 14  
(branched primary alc. compns. and derivs. for  
**surfactants** with good cold water **solubility** and  
high Ca tolerance)

IT 7790-94-5, Chlorosulfonic acid  
(sulfonation of branched primary alc.; branched primary alc.  
compns. and derivs. for **surfactants** with good cold  
water **solubility** and high Ca tolerance)

L40 ANSWER 3 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:59184 HCAPLUS

DOCUMENT NUMBER: 136:264906

TITLE: Use of octanol/water partition coefficients as  
hydrophobicity parameters in  
**surfactant** science

AUTHOR(S): Roberts, David W.

CORPORATE SOURCE: Unilever Research Port Sunlight, Behbington,  
Wirral, CH63 3JW, UK

SOURCE: World Surfactants Congress, 5th, Firenze,  
Italy, May 29-June 2, 2000 (2000),  
1542-1550. Comite Europeen des Agents de  
Surface et leurs Intermediaires Organiques:  
Brussels, Belg.  
CODEN: 69BYUW

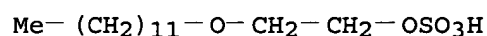
DOCUMENT TYPE: Conference; (computer optical disk)

LANGUAGE: English

AB The octanol/water partition coefficient P (sometimes referred to as  
Ko/w) is widely used, usually as its logarithm, in modeling

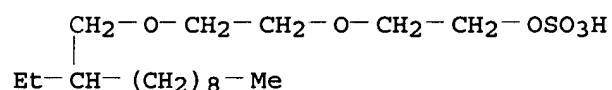
pharmacol. and toxicol. properties of chems. Since log P values can be calculated from mol. structure, they are very useful in predicting various biol. properties of chems. This paper describes how the log P calcn. **method** can be extended to **surfactants**, and how log P and log P fragment values can be used as hydrophobicity parameters in quant. structure-activity relationships for a range of **surfactant** properties, including aquatic toxicity, critical micelle concentration and **solubilizability**.

IT 15826-16-1 405196-62-5  
 (use of octanol/water partition coeffs. as hydrophobicity parameters in **surfactant** science)  
 RN 15826-16-1 HCAPLUS  
 CN Ethanol, 2-(dodecyloxy)-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 405196-62-5 HCAPLUS  
 CN Ethanol, 2-[2-[(2-ethylundecyl)oxy]ethoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



● Na

CC 46-3 (Surface Active Agents and **Detergents**)  
 Section cross-reference(s): 65  
 ST **surfactant** hydrophobicity parameter calcn **method**  
 partition coeff  
 IT Toxicity  
 (aquatic; use of octanol/water partition coeffs. as hydrophobicity parameters in **surfactant** science)  
 IT Alcohols, uses  
 (ethoxylated; use of octanol/water partition coeffs. as hydrophobicity parameters in **surfactant** science)  
 IT Critical micelle concentration  
 Hydrophobicity  
 Mathematical **methods**  
 Partition  
 QSAR (structure-activity relationship)  
 Solubility  
 Surfactants  
 (use of octanol/water partition coeffs. as hydrophobicity parameters in **surfactant** science)  
 IT 60-01-5, Tributyrin 71-43-2, Benzene, uses 99-87-6, p-Cymene  
 100-41-4, Ethylbenzene, uses 103-65-1, n-Propylbenzene  
 104-51-8, n-Butylbenzene 104-76-7, 2-Ethyl hexanol 106-42-3,

p-Xylene, uses 108-10-1, Methyl isobutyl ketone 108-88-3,  
 Toluene, uses 110-54-3, n-Hexane, uses 111-65-9, n-Octane,  
 uses 111-84-2, n-Nonane 111-86-4, n-Octylamine 111-87-5,  
 n-Octanol, uses 112-40-3, n-Dodecane 112-53-8, Lauryl alcohol  
 124-18-5, n-Decane 142-82-5, n-Heptane, uses 538-68-1,  
 n-Amylbenzene 628-63-7, n-Amyl acetate 629-59-4, n-Tetradecane  
 1634-04-4, Methyl tert-butyl ether 17348-59-3

(solubility of; in use of octanol/water partition coeffs.  
 as hydrophobicity parameters in surfactant science)

IT 29063-28-3, Octanol

(solubility of; in use of octanol/water partition coeffs.  
 as hydrophobicity parameters in surfactant science)

IT 7732-18-5, Water, properties

(use of octanol/water partition coeffs. as hydrophobicity  
 parameters in surfactant science)

IT 151-21-3, Sodium dodecylsulfate, uses 2211-98-5, Sodium  
 4-dodecylbenzenesulfonate 4016-21-1 4536-30-5 4669-23-2  
 15826-16-1 61670-33-5, Sodium 2-methyldodecylsulfate  
 81089-97-6 146794-61-8 405196-62-5

(use of octanol/water partition coeffs. as hydrophobicity  
 parameters in surfactant science)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L40 ANSWER 4 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:57087 HCAPLUS

DOCUMENT NUMBER: 134:117347

TITLE: Lignin removing agents for oxygen bleaching of  
 pulps

INVENTOR(S): Oki, Yoshiaki; Suzuki, Takehiro; Kajigaya,  
 Hiromi

PATENT ASSIGNEE(S): Toho Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE         |
|---------------|------|----------|-----------------|--------------|
| -----         | ---- | -----    | -----           | -----        |
| JP 2001020192 | A2   | 20010123 | JP 1999-224339  | 1999<br>0705 |

PRIORITY APPLN. INFO.: <-- JP 1999-224339

1999  
0705

OTHER SOURCE(S): MARPAT 134:117347

AB The lignin removing agents comprise RO(EO)nSO<sub>3</sub>M and/or  
 [RO(EO)n]mPO(OM)q (R = C<sub>6</sub>-22-linear or branched alkyl, alkenyl,  
 alkylphenyl containing C<sub>8</sub>-12 alkyl, alkylcyclohexyl; EO = oxyethylene;  
 n = 0-30; m = 1, 2; m + q = 3, M = H, monovalent metal atom,  
 ammonium, alkanolammonium). Thus, pulps (Kappa number 10.7) were  
 O-bleached in the presence of a composition containing sodium  
 tridecyltriethoxysulfate to show Kappa number 10.7 and Hunter  
 whiteness 43.8.

IT 25446-78-0P, Sodium tridecyltriethoxysulfate  
38974-99-1P, Sodium decyldiethoxysulfate  
(lignin removing surfactants for oxygen bleaching of pulps)  
RN 25446-78-0 HCAPLUS  
CN Ethanol, 2-[2-[2-(tridecyloxy)ethoxy]ethoxy]-, hydrogen sulfate,  
sodium salt (8CI, 9CI) (CA INDEX NAME)

Me- (CH<sub>2</sub>)<sub>12</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

RN 38974-99-1 HCAPLUS  
CN Ethanol, 2-[2-(decyloxy)ethoxy]-, hydrogen sulfate, sodium salt  
(9CI) (CA INDEX NAME)

Me- (CH<sub>2</sub>)<sub>9</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

IC ICM D21C009-147  
ICS C11D001-12; C11D001-34  
CC 43-6 (Cellulose, Lignin, Paper, and Other Wood Products)  
Section cross-reference(s): 46  
IT 9046-01-9P, Phosphoric acid ester with ethoxylated tridecyl  
alcohol 25446-78-0P, Sodium tridecyltriethoxysulfate  
38974-99-1P, Sodium decyldiethoxysulfate 51811-79-1P,  
Phosphoric acid ester with ethoxylated nonylphenol 320573-52-2P  
320574-26-3P 320574-27-4P, Phosphoric acid ester with  
ethoxylated nonylcyclohexanol 320574-30-9P  
(lignin removing surfactants for oxygen bleaching of pulps)

L40 ANSWER 5 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:634990 HCAPLUS  
DOCUMENT NUMBER: 133:207590  
TITLE: Preparation of sulfuric acid esters for  
anionic surfactants  
INVENTOR(S): Yamamoto, Goro  
PATENT ASSIGNEE(S): Asahi Denka Kogyo K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE         |
|---------------|------|----------|-----------------|--------------|
| JP 2000247947 | A2   | 20000912 | JP 1999-52276   | 1999<br>0301 |

<--

PRIORITY APPLN. INFO.:

JP 1999-52276

1999  
0301

&lt;--

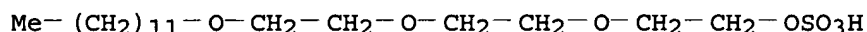
OTHER SOURCE(S): CASREACT 133:207590

AB Title compds. are prepared by reaction of hydroxy compds. with 0.5-1.5 mol H<sub>2</sub>SO<sub>4</sub> per 1 mol OH group as 10-99 weight% aqueous solution. Triethylene glycol lauryl ether (1 mol) was reacted with 1.1 mol H<sub>2</sub>SO<sub>4</sub> (50% aqueous solution) at 20-30° under 5-50 mmHg for 4 h to give triethylene glycol lauryl ether sulfate at 96% conversion., which was treated with NaOH to give Na salt with Gardner color number 1.

IT 14960-11-3P, Triethylene glycol lauryl ether sulfate  
(preparation of sulfuric acid esters for anionic surfactants)

RN 14960-11-3 HCAPLUS

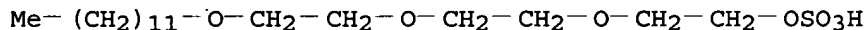
CN Ethanol, 2-[2-[2-(dodecyloxy)ethoxy]ethoxy]-, hydrogen sulfate  
(8CI, 9CI) (CA INDEX NAME)



IT 13150-00-0P, Triethylene glycol lauryl ether sulfate  
sodium salt  
(preparation of sulfuric acid esters for anionic surfactants)

RN 13150-00-0 HCAPLUS

CN Ethanol, 2-[2-[2-(dodecyloxy)ethoxy]ethoxy]-, hydrogen sulfate,  
sodium salt (7CI, 8CI, 9CI) (CA INDEX NAME)



● Na

IC ICM C07C303-24

ICS C07C305-06; C07C305-08; C07C305-10; C11D001-14; C11D001-29

CC 23-8 (Aliphatic Compounds)

Section cross-reference(s): 46

IT 151-41-7P, Lauryl sulfate 14960-11-3P, Triethylene  
glycol lauryl ether sulfate  
(preparation of sulfuric acid esters for anionic surfactants)

IT 151-21-3P, Sodium lauryl sulfate, preparation 13150-00-0P  
, Triethylene glycol lauryl ether sulfate sodium salt  
(preparation of sulfuric acid esters for anionic surfactants)

L40 ANSWER 6 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:396795 HCAPLUS

DOCUMENT NUMBER: 133:4800

TITLE: Preparation of quaternary phosphine salts as  
disinfectants and surfactants

INVENTOR(S): Yao, Cheng; Wang, Jintang; Zhu, Hongjun; Pu,  
Hongzhong; Chen, Guosong

PATENT ASSIGNEE(S): Nanjing Chemical Engineering Inst., Peop. Rep.  
China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu,  
12 pp.

CODEN: CNXXEV

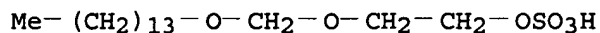
DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE         |
|------------|------|----------|-----------------|--------------|
| CN 1220267 | A    | 19990623 | CN 1998-111552  | 1998<br>1102 |
| CN 1061051 | B    | 20010124 | CN 1998-111552  | 1998<br>1102 |

PRIORITY APPLN. INFO.: <--

OTHER SOURCE(S): CASREACT 133:4800; MARPAT 133:4800  
 AB The modified quaternary phosphonium salts are including  
 ROCH<sub>2</sub>P(R<sub>1</sub>)(R<sub>2</sub>)(R<sub>3</sub>)X, ROCH<sub>2</sub>OCH<sub>2</sub>CH<sub>2</sub>P(R<sub>1</sub>)(R<sub>2</sub>)(R<sub>3</sub>)X, or  
 RO(CH<sub>2</sub>CH<sub>2</sub>)<sub>m</sub>-1CH<sub>2</sub>CH<sub>2</sub>P(R<sub>1</sub>)(R<sub>2</sub>)(R<sub>3</sub>)X (R = C<sub>1</sub>-22 alkyl, Ph, or C<sub>1</sub>-18  
 alkylphenyl; R<sub>1</sub>, and/or R<sub>2</sub>, and/or R<sub>3</sub> = C<sub>1</sub>-4 alkyl, Ph, or benzyl;  
 X = Cl, Br, or HSO<sub>4</sub>; and m = 1-50). Compds. ROCH<sub>2</sub>P(R<sub>1</sub>)(R<sub>2</sub>)(R<sub>3</sub>)X  
 or ROCH<sub>2</sub>OCH<sub>2</sub>CH<sub>2</sub>P(R<sub>1</sub>)(R<sub>2</sub>)(R<sub>3</sub>)X are prepared by allowing to react ROH  
 with (CH<sub>2</sub>O)<sub>n</sub> and MX or HOCH<sub>2</sub>CH<sub>2</sub>X in the presence of acid or base  
 at 20-100Φ' to obtain ROCH<sub>2</sub>X or ROCH<sub>2</sub>OCH<sub>2</sub>CH<sub>2</sub>X, and allowing to  
 react with P(R<sub>1</sub>)(R<sub>2</sub>)(R<sub>3</sub>) at 60-200° and 0-1 MPa for 4-80 h  
 under bubbling inert gas (N<sub>2</sub>). Compds. RO(CH<sub>2</sub>CH<sub>2</sub>)<sub>m</sub>-  
 1CH<sub>2</sub>CH<sub>2</sub>P(R<sub>1</sub>)(R<sub>2</sub>)(R<sub>3</sub>)X are prepared by allowing to react  
 RO(CH<sub>2</sub>CH<sub>2</sub>O)<sub>m</sub>H with SOCl<sub>2</sub> in the presence of organic base at  
 40-100° for 2-12 h, distilling in vacuum to obtain  
 RO(CH<sub>2</sub>CH<sub>2</sub>O)<sub>m</sub>-1CH<sub>2</sub>CH<sub>2</sub>Cl, and allowing to react P(R<sub>1</sub>)(R<sub>2</sub>)(R<sub>3</sub>). The  
 modified quaternary phosphonium salt is used as surfactant for  
 sterilizing sulfate reducing bacteria in oil field and industrial  
 water treatment, and as emulsifier, dispersant, antistatic agent,  
 and disinfectant in textile dye, daily chems.

IT 270911-26-7P  
 (preparation of quaternary phosphine salts as bactericides and  
 surfactants)  
 RN 270911-26-7 HCAPLUS  
 CN Ethanol, 2-[(tetradecyloxy)methoxy]-, hydrogen sulfate (9CI) (CA  
 INDEX NAME)



IC ICM C07F009-02  
 ICS A01N057-04; C09K003-16  
 CC 29-7 (Organometallic and Organometalloidal Compounds)  
 Section cross-reference(s): 23  
 IT 13497-61-5P 13497-62-6P 13497-63-7P 29677-37-0P  
 60220-18-0P 60220-20-4P 63772-28-1P 88591-69-9P  
 253445-12-4P 253445-17-9P 270911-07-4P 270911-08-5P  
 270911-23-4P 270911-24-5P 270911-26-7P 270911-45-0P  
 (preparation of quaternary phosphine salts as bactericides and  
 surfactants)

L40 ANSWER 7 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2000:342677 HCAPLUS

DOCUMENT NUMBER: 132:323051  
 TITLE: Sprays producing artificial snow flakes  
 INVENTOR(S): Cui, Yuefei  
 PATENT ASSIGNEE(S): Peop. Rep. China  
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 7 pp.  
 CODEN: CNXXEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE      |
|------------|------|----------|-----------------|-----------|
| CN 1213685 | A    | 19990414 | CN 1998-113326  | 1998 0827 |

PRIORITY APPLN. INFO.: CN 1998-113326 1998 0827

AB Spray liqs. contain foaming **surfactants** 1.0-30.0, foam stabilizers 0.1-3.0, **solubilizers** 5.0-30.0, perfume 0.03-0.5, and H2O 65.0-85.0%. Thus, a spray liquid contained Na lauryl sulfate 6.0, Na CM-cellulose 1.0, ethanol 10.0, isopropanol 3.0, propylene glycol 1.0, jasmine essence 0.2, and H2O 78.8%.

IT 3088-31-1, Diethylene glycol lauryl ether sodium sulfate (**surfactants**; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)

RN 3088-31-1 HCAPLUS

CN Ethanol, 2-[2-(dodecyloxy)ethoxy]-, hydrogen sulfate, sodium salt (7CI, 8CI, 9CI) (CA INDEX NAME)

Me-(CH<sub>2</sub>)<sub>11</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

IC ICM C09K003-24  
 CC 42-10 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 46  
 ST spray **surfactant** artificial snow flake; soap spray artificial snow flake; foam stabilizer spray artificial snow flake; **solubilizer** spray artificial snow flake  
 IT Sulfonates  
 (alkanesulfonates, **surfactants**; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)  
 IT Sulfonates  
 Sulfonates  
 (alkenesulfonates, **surfactants**; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)



- IT Polyoxyalkylenes, uses  
(alkyl ethers, **surfactants**; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT Phenols, uses  
(alkyl, ethoxylated, **surfactants**; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT **Surfactants**  
(amphoteric; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT **Surfactants**  
(anionic; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT Propellants (sprays and foams)  
(butane and compressed air; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT Fatty acids, uses  
(coco, ethanolamides, **surfactants**; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT Air  
(compressed, propellants; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT Flower  
Jasmine (Jasminum)  
Lemon (Citrus limon)  
Lemon (Citrus limon)  
(essence; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT Fatty acids, uses  
(esters, sulfonated, salts; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT Alcohols, uses  
(ethoxylated, **surfactants**; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT Amides, uses  
(fatty, **surfactants**; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT Polymers, uses  
(foam stabilizers; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT Stabilizing agents  
(foams; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT Essences  
Essences  
(lemon; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)

- IT **Surfactants**  
(nonionic; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT **Soaps**  
(potassium; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT **Soaps**  
(sodium; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT **Alcohols, uses**  
(**solubilizers**; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT **Perfumes**  
(spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT **Coating process**  
(spray; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT **Alkenes, uses**  
**Alkenes, uses**  
(sulfonates, **surfactants**; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT **Amino acids, uses**  
**Betaines**  
**Esters, uses**  
(**surfactants**; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT 137-20-2, Igepon T  
(Igepon T, **surfactants**; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT 9005-66-7, Tween 40  
(Tween 40, **surfactants**; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT 7664-93-9, Sulfuric acid, uses  
(alc. esters, salts, **surfactants**; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT 9000-01-5, Gum arabic    9002-89-5, Poly(vinyl alcohol)  
9003-01-4, Polyacrylic acid    9004-32-4    9004-62-0,  
Hydroxyethylcellulose    9004-67-5, Methylcellulose    9005-25-8,  
**Starch, uses**  
(foam stabilizers; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT 106-97-8, Butane, uses  
(propellants; spray liqs. containing foaming **surfactants** and foam stabilizers and **solubilizers** and perfumes for artificial snow flakes)
- IT 56-81-5, Glycerol, uses    64-17-5, Ethanol, uses    67-63-0,  
Isopropanol, uses    26264-14-2, Propanediol

(solubilizers; spray liqs. containing foaming surfactants and foam stabilizers and solubilizers and perfumes for artificial snow flakes)

IT 822-12-8, Sodium tetradecanoate (spray liqs. containing foaming surfactants and foam stabilizers and solubilizers and perfumes for artificial snow flakes)

IT 98-11-3D, Benzenesulfonic acid, alkyl, salts, uses 111-42-2D, Diethanolamine, coco fatty acid amides 120-40-1, Lauric acid diethanolamide 151-21-3, Sodium dodecyl sulfate, uses 3088-31-1, Diethylene glycol lauryl ether sodium sulfate 3546-96-1, Sodium laurylaminopropionate 6148-96-5, Propyl  $\alpha$ -sodiosulfododecanoate 7423-32-7, Disodium lauryl phosphate 9016-45-9, Polyoxyethylene nonylphenyl ether 9036-19-5, Polyoxyethylene octylphenyl ether 25155-30-0, Sodium dodecylbenzenesulfonate 25322-68-3D, Polyethylene glycol, alkyl ethers 25339-99-5, Sucrose monolaurate 25496-92-8, Sucrose monooleate 25915-57-5, Sucrose dilaurate (surfactants; spray liqs. containing foaming surfactants and foam stabilizers and solubilizers and perfumes for artificial snow flakes)

L40 ANSWER 8 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:63216 HCAPLUS  
 DOCUMENT NUMBER: 132:124549  
 TITLE: Antibacterial cleaning composition with good storability for kitchen uses  
 INVENTOR(S): Takano, Katsuyuki; Maruta, Kazunari  
 PATENT ASSIGNEE(S): Kao Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE      |
|---------------|------|----------|-----------------|-----------|
| JP 2000026885 | A2   | 20000125 | JP 1998-191349  | 1998 0707 |

PRIORITY APPLN. INFO.: JP 1998-191349 1998 0707

AB Title composition, useful for cleaning sponges, chopping boards, dishes, vegetables, and fruits, etc., comprises (A) surfactants 1-80, (B) polylysine 0.0001-1, and (C)  $\geq 1$  compound selected from 2-bromo-2-nitropropane-1,3-diol, 1,2-benzisothiazolin-3-one, and 5-chloro-2-methyl-4-isothiazolin-3-one 0.00001-0.2 wt%. Thus, a cleaning agent comprising tetraethylene glycol dodecyl ether Na sulfate 13, dodecyl di-Me amine oxide 2, palm-kernel fatty acid diethanolamide 4,  $\text{CH}_3(\text{CH}_2)_{11}\text{CONH}(\text{CH}_2)_3\text{N}^+(\text{CH}_3)_2\text{CH}_2\text{COO}^-$  2,  $\epsilon$ -polylysine 0.5, 2-bromo-2-nitropropane-1,3-diol 0.02, and  $\text{H}_2\text{O}$  showed good foaming ability, cleaning power, and antibacterial effect against Escherichia coli and Staphylococcus aureus even after high temperature storage.

IT 3088-31-1  
 (preparation of antibacterial cleaning composition with good storability for kitchen uses)  
 RN 3088-31-1 HCAPLUS  
 CN Ethanol, 2-[2-(dodecyloxy)ethoxy]-, hydrogen sulfate, sodium salt (7CI, 8CI, 9CI) (CA INDEX NAME)

Me-(CH<sub>2</sub>)<sub>11</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

IC ICM C11D001-00  
 ICS C11D003-26; C11D003-33; C11D003-34; C11D003-37  
 CC 46-6 (Surface Active Agents and Detergents)  
 ST antibacterial cleaning agent kitchen storability;  
 bromonitropropanediol surfactant polylysine cleaning agent antibacterial storability  
 IT Amides, uses  
 (N-(hydroxyalkyl); preparation of antibacterial cleaning composition with good storability for kitchen uses)  
 IT Surfactants  
 (amphoteric; preparation of antibacterial cleaning composition with good storability for kitchen uses)  
 IT Surfactants  
 (anionic; preparation of antibacterial cleaning composition with good storability for kitchen uses)  
 IT Detergents  
 (dishwashing; preparation of antibacterial cleaning composition with good storability for kitchen uses)  
 IT Surfactants  
 (nonionic; preparation of antibacterial cleaning composition with good storability for kitchen uses)  
 IT Fatty acids, uses  
 (palm kernel-oil, diethanol amide; preparation of antibacterial cleaning composition with good storability for kitchen uses)  
 IT Antibacterial agents  
 (preparation of antibacterial cleaning composition with good storability for kitchen uses)  
 IT 52-51-7, 2-Bromo-2-nitropropane-1,3-diol 1643-20-5,  
 Dodecyl dimethyl amine oxide 2634-33-5, 1,2-Benzisothiazolin-3-one 3055-94-5, Triethylene glycol dodecyl ether 3055-97-8,  
 Heptaethylene glycol dodecyl ether 3088-31-1 9004-82-4  
 25104-18-1, Lysine homopolymer 25729-05-9 26172-55-4,  
 5-Chloro-2-methyl-4-isothiazolin-3-one 28211-04-3 29963-33-5,  
 Sodium α-Tetradecenesulfonate 69227-93-6 109040-59-7,  
 Glucose caprate  
 (preparation of antibacterial cleaning composition with good storability for kitchen uses)

L40 ANSWER 9 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2000:23701 HCAPLUS  
 DOCUMENT NUMBER: 132:65772  
 TITLE: Sulfation and sulfonation methods for organic compounds and production methods for surfactants therewith

INVENTOR(S): Yamada, Hiroaki; Toyama, Naoaki  
 PATENT ASSIGNEE(S): Lion Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE         |
|---------------|------|----------|-----------------|--------------|
| JP 2000007644 | A2   | 20000111 | JP 1998-178941  | 1998<br>0625 |

PRIORITY APPLN. INFO.: JP 1998-178941  
 1998  
 0625

AB Petroleum or vegetable oils are sulfated or sulfonated and defoamed to give products, and the separation is controlled to allow the deviation of the acid number after the reaction and after the separation to fall into a set limit. Thus, triethylene glycol lauryl ether was treated with SO<sub>3</sub> and separated with the deviation of acid number 0-1.

IT 14960-11-3P, Triethylene glycol dodecyl ether sulfate  
 (sulfation and sulfonation of organic compds. for surfactants)

RN 14960-11-3 HCAPLUS

CN Ethanol, 2-[2-[2-(dodecyloxy)ethoxy]ethoxy]-, hydrogen sulfate  
 (8CI, 9CI) (CA INDEX NAME)

Me-(CH<sub>2</sub>)<sub>11</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

IC ICM C07C303-06  
 ICS B01F017-04; B01F017-08; B01F017-12; C07C309-01; C07C309-20

CC 46-3 (Surface Active Agents and Detergents)  
 Section cross-reference(s): 23, 25

IT 14960-11-3P, Triethylene glycol dodecyl ether sulfate  
 (sulfation and sulfonation of organic compds. for surfactants)

L40 ANSWER 10 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:741974 HCAPLUS  
 DOCUMENT NUMBER: 132:50521  
 TITLE: Polymer gels and **surfactants** - Their interactions and hybrid materials  
 AUTHOR(S): Tsujii, Kaoru  
 CORPORATE SOURCE: The DEEPSTAR Group, Japan Marine Science and Technology Center, Yokosuka, 237-0061, Japan  
 SOURCE: Nippon Kagaku Kaishi (1999), (11), 701-713  
 CODEN: NKAKB8; ISSN: 0369-4577  
 PUBLISHER: Nippon Kagakkai  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Japanese

AB The interactions and hybrid materials between polymer hydrogels and **surfactants** were overviewed. The volume phase transition behavior of poly(N-isopropylacrylamide) gel (NIPA) is

dramatically changed on addition of some **surfactants**, depending upon the chemical structure of the agents. In order to elucidate the above, binding isotherms of the **surfactants** onto the NIPA gel have been measured. Discontinuous and reversible binding was first observed in the NIPA gel/ionic **surfactant** systems. The phase transition of the gel also took place at the same concentration of the agent as that of the discontinuous binding. The binding affinity of **surfactants** is, then, switched by the conformational change of the polymer chains through its phase transition. This affinity switching is a good mimic of protein functions such as oxygen uptake of Hb and/or catalytic **process** of enzymes. The increments of the phase transition temperature of the NIPA gel on addition of a **surfactant** are linearly related to the binding amount of the agent at the transition point. This means that the binding ability of **surfactant** governs the phase transition temperature of NIPA gel. A hybrid material of polymer hydrogels and bilayer membranes has been first **synthesized** and characterized. A polymerizable **surfactant**, 2,3-dihydroxypropyl dodecyl itaconate (DDI), forms an iridescent solution resulting from a periodic structure of bilayer membranes. This iridescent lamellar structure of DDI can be photo-polymerized by UV-light together with water-soluble monomers such as acrylamide, NIPA and N,N'-methylenebisacrylamide (a cross linker). The bilayer-membranes-immobilized polymer gels thus obtained show some unique properties that are not obtained from either component. Anisotropic gels obtained by photo-polymerization after shear flow of the monomer mixts. show interesting anisotropic behaviors in swelling, optical and mech. properties.

IT 15826-16-1, Sodium [2-(dodecyloxy(ethyl] sulfate  
(**surfactant**; interaction between polymer gels and **surfactants**)  
RN 15826-16-1 HCAPLUS  
CN Ethanol, 2-(dodecyloxy)-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)

Me<sup>-</sup> (CH<sub>2</sub>)<sub>11</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

CC 36-7 (Physical Properties of Synthetic High Polymers)  
Section cross-reference(s): 46  
ST polyisopropylacrylamide gel **surfactant** interaction  
IT Polymer morphology  
**Surfactants**  
(interaction between polymer gels and **surfactants**)  
IT 90398-43-9  
(interaction between polymer gels and **surfactants**)  
IT 112-00-5, Dodecyltrimethylammonium chloride 151-21-3, Sodium dodecyl sulfate, properties 929-73-7, Dodecylamine hydrochloride 2386-53-0, Sodium dodecanesulfonate 9002-92-0, Polyethylene glycol monododecyl ether 9016-45-9, Polyethylene glycol monononylphenyl ether 15826-16-1, Sodium [2-(dodecyloxy(ethyl] sulfate 15827-29-9 55656-86-5, Potassium tridecanoate  
(**surfactant**; interaction between polymer gels and

## surfactants)

L40 ANSWER 11 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:422709 HCAPLUS

DOCUMENT NUMBER: 131:311922

TITLE: Effect of polyoxybutylene chain length on the properties of alkyl sodium sulfates in aqueous solution

AUTHOR(S): Chlebicki, J.

CORPORATE SOURCE: Institute Organic Polymer Technology, Wroclaw Univ. Technology, Wroclaw, 50370, Pol.

SOURCE: Progress in Colloid & Polymer Science (1999), 112(Trends in Colloid and Interface Science XIII), 136-139  
CODEN: PCPSD7; ISSN: 0340-255X

PUBLISHER: Springer

DOCUMENT TYPE: Journal

LANGUAGE: English

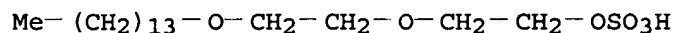
AB The micelle formation and adsorption phenomena at the air-water interface of polyoxybutylenated higher alc. sodium sulfates (RO[CH<sub>2</sub>CH(C<sub>2</sub>H<sub>5</sub>)O]<sub>m</sub> SO<sub>3</sub>Na where R = C<sub>8</sub>H<sub>17</sub>, C<sub>10</sub>H<sub>21</sub>, C<sub>12</sub>H<sub>25</sub>, C<sub>14</sub>H<sub>29</sub>, and m = 1, 2, 3, and 4) were investigated in aqueous solution by surface tension measurements over a concentration range 10<sup>-5</sup>-10<sup>-2</sup> mol/dm<sup>3</sup> at 20°. These were synthesized from C<sub>8</sub>-C<sub>14</sub> alcs. and α-butylene oxide and subsequently sulfated with ClSO<sub>3</sub>H. The critical micelle concentration (CMC) and Gibbs free-energy change of micellization, ΔG<sub>mic</sub>°, were determined from the surface tension data of the solns. It was found that the CMC values of the compds. studied decrease with the increasing chain length of polyoxybutylene and the increasing number of C atoms in the alkyl group. The change in cohesion energy, WBO = 1.85 kT, for polyoxybutylene chains was determined (0.60 per oxybutylene unit). This is comparable with the van der Waals energy of interaction per CH<sub>2</sub> group, WCH<sub>2</sub>, in adjacent hydrocarbon chains due to micelle formation.

IT 78099-55-5P 78099-56-6P 247911-18-8P  
247911-19-9P 247911-20-2P 247911-21-3P  
247911-22-4P 247911-23-5P 247911-24-6P  
247911-25-7P 247911-26-8P 247911-27-9P  
247911-28-0P

(polyoxybutylene chain length effects on properties of alkyl sodium sulfates in aqueous solution)

RN 78099-55-5 HCAPLUS

CN Ethanol, ethyl-2-[ethyl-2-(tetradecyloxy)ethoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)

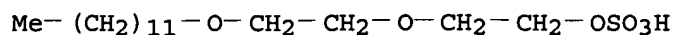


2 ( D1-Et )

● Na

RN 78099-56-6 HCAPLUS

CN Ethanol, 2-[2-(dodecyloxy)ethylethoxy]ethyl-, hydrogen sulfate,  
sodium salt (9CI) (CA INDEX NAME)

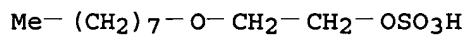


2 ( D1-Et )

● Na

RN 247911-18-8 HCAPLUS

CN Butanol, 1(or 2)-(octyloxy)-, hydrogen sulfate, sodium salt (9CI)  
(CA INDEX NAME)

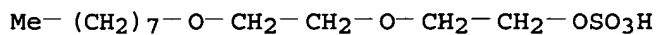


D1-Et

● Na

RN 247911-19-9 HCAPLUS

CN Butanol, 1(or 2)-[ethyl-2-(octyloxy)ethoxy]-, hydrogen sulfate,  
sodium salt (9CI) (CA INDEX NAME)



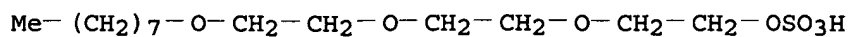
2 ( D1-Et )

● Na

RN 247911-20-2 HCAPLUS

CN Butanol, 1(or 2)-[ethyl-2-[ethyl-2-(octyloxy)ethoxy]ethoxy]-,  
hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)





3 ( D1-Et )

● Na

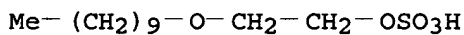
RN 247911-21-3 HCAPLUS  
CN 3,6,9,12-Tetraoxaeicosan-1-ol, tetraethyl-, hydrogen sulfate,  
sodium salt (9CI) (CA INDEX NAME)



4 ( D1-Et )

● Na

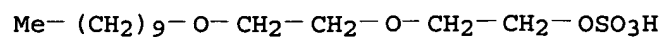
RN 247911-22-4 HCAPLUS  
CN Butanol, 1(or 2)-(decyloxy)-, hydrogen sulfate, sodium salt (9CI)  
(CA INDEX NAME)



D1-Et

● Na

RN 247911-23-5 HCAPLUS  
CN Butanol, 1(or 2)-[2-(decyloxy)ethylethoxy]-, hydrogen sulfate,  
sodium salt (9CI) (CA INDEX NAME)

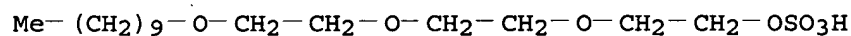


2 ( D1-Et )

● Na

RN 247911-24-6 HCAPLUS

CN Butanol, 1(or 2)-[2-[2-(decyloxy)ethylethoxy]ethylethoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)

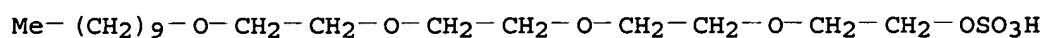


3 ( D1-Et )

● Na

RN 247911-25-7 HCAPLUS

CN 3,6,9,12-Tetraoxadocosan-1-ol, tetraethyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)

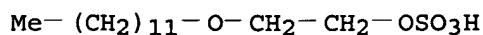


4 ( D1-Et )

● Na

RN 247911-26-8 HCAPLUS

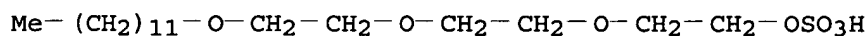
CN Butanol, 1(or 2)-(dodecyloxy)-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



D1- Et

● Na

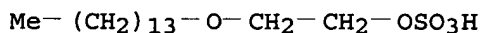
RN 247911-27-9 HCAPLUS  
CN Butanol, 1(or 2)-[2-[2-(dodecyloxy)ethylethoxy]ethylethoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



3 ( D1- Et )

● Na

RN 247911-28-0 HCAPLUS  
CN Butanol, 1(or 2)-(tetradecyloxy)-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



D1- Et

● Na

CC 46-3 (Surface Active Agents and Detergents)  
IT 78099-55-5P 78099-56-6P 247911-18-8P  
247911-19-9P 247911-20-2P 247911-21-3P  
247911-22-4P 247911-23-5P 247911-24-6P  
247911-25-7P 247911-26-8P 247911-27-9P  
247911-28-0P

(polyoxybutylene chain length effects on properties of alkyl sodium sulfates in aqueous solution)

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

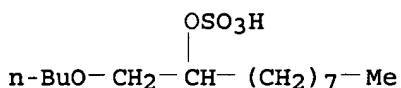
L40 ANSWER 12 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1998:742356 HCAPLUS  
DOCUMENT NUMBER: 130:14903

TITLE: Wetting agent for use in aqueous treatment  
baths for textile fibers  
INVENTOR(S): Held, Egon; Hois, Pia; Freyberg, Peter  
PATENT ASSIGNEE(S): BASF A.-G., Germany  
SOURCE: Ger. Offen., 12 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

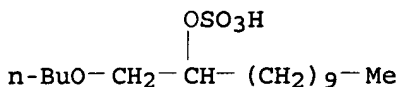
| PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE         |
|-------------|------|----------|------------------|--------------|
| DE 19719688 | A1   | 19981112 | DE 1997-19719688 | 1997<br>0509 |

PRIORITY APPLN. INFO.: <--  
DE 1997-19719688  
1997  
0509

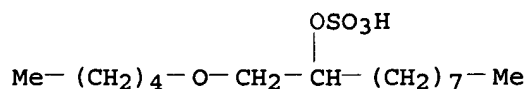
OTHER SOURCE(S): MARPAT 130:14903  
AB The title wetting agents contain polyoxyalkylene ether sulfates  
and/or polyoxyalkylene monoalkyl ethers of specified structure.  
Adding 0.4 mol 1,2-epoxydodecane slowly to 1.36 mol 1-hexanol and  
0.6 mol NaOH stirred at 40-50° and stirring at  
.apprx.70° until reaction was complete gave  
C<sub>6</sub>H<sub>13</sub>OCH<sub>2</sub>CH(C<sub>10</sub>H<sub>21</sub>)OH. The alkali stabilities and contact angles  
of aqueous solns. of the products vs. PTFE are given.  
IT 215943-66-1P 215943-73-0P 215943-76-3P  
215943-81-0P 215943-83-2P 215943-87-6P  
215943-89-8P 215943-92-3P 215944-00-6P  
215944-03-9P 215944-06-2P 215944-10-8P  
(wetting agent for use in aqueous treatment baths for textile  
fibers)  
RN 215943-66-1 HCAPLUS  
CN 2-Decanol, 1-butoxy-, hydrogen sulfate (9CI) (CA INDEX NAME)



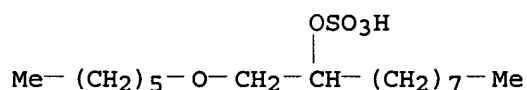
RN 215943-73-0 HCAPLUS  
CN 2-Dodecanol, 1-butoxy-, hydrogen sulfate (9CI) (CA INDEX NAME)



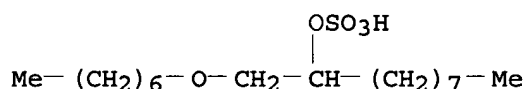
RN 215943-76-3 HCAPLUS  
CN 2-Decanol, 1-(pentyloxy)-, hydrogen sulfate (9CI) (CA INDEX NAME)



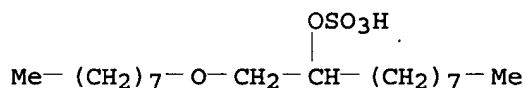
RN 215943-81-0 HCAPLUS  
 CN 2-Decanol, 1-(hexyloxy)-, hydrogen sulfate (9CI) (CA INDEX NAME)



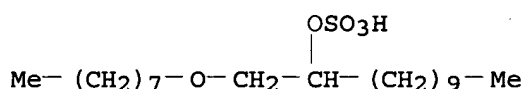
RN 215943-83-2 HCAPLUS  
 CN 2-Decanol, 1-(heptyloxy)-, hydrogen sulfate (9CI) (CA INDEX NAME)



RN 215943-87-6 HCAPLUS  
 CN 2-Decanol, 1-(octyloxy)-, hydrogen sulfate (9CI) (CA INDEX NAME)

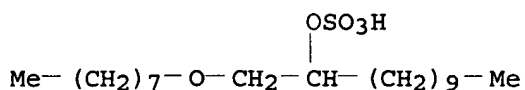


RN 215943-89-8 HCAPLUS  
 CN 2-Dodecanol, 1-(octyloxy)-, hydrogen sulfate, sodium salt (9CI)  
 (CA INDEX NAME)



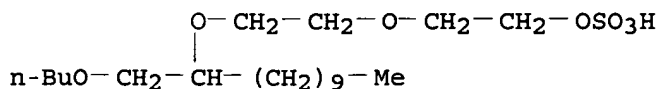
● Na

RN 215943-92-3 HCAPLUS  
 CN 2-Dodecanol, 1-(octyloxy)-, hydrogen sulfate, potassium salt (9CI)  
 (CA INDEX NAME)

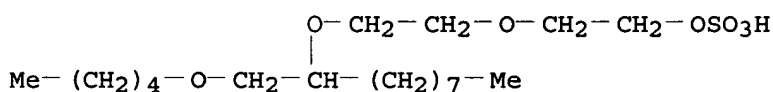


● K

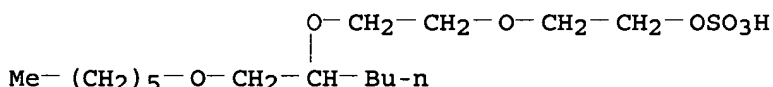
RN 215944-00-6 HCAPLUS  
 CN Ethanol, 2-[2-[[1-(butoxymethyl)undecyl]oxy]ethoxy]-, hydrogen sulfate (9CI) (CA INDEX NAME)



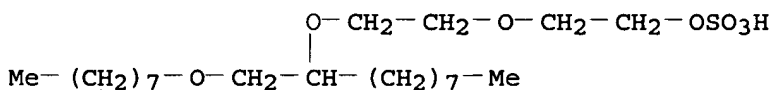
RN 215944-03-9 HCAPLUS  
 CN Ethanol, 2-[2-[[1-[(pentyloxy)methyl]nonyl]oxy]ethoxy]-, hydrogen sulfate (9CI) (CA INDEX NAME)



RN 215944-06-2 HCAPLUS  
 CN Ethanol, 2-[2-[[1-[(hexyloxy)methyl]pentyl]oxy]ethoxy]-, hydrogen sulfate (9CI) (CA INDEX NAME)



RN 215944-10-8 HCAPLUS  
 CN Ethanol, 2-[2-[[1-[(octyloxy)methyl]nonyl]oxy]ethoxy]-, hydrogen sulfate (9CI) (CA INDEX NAME)



IC ICM C07C305-10  
 ICS C07C043-13; C07C303-24; C07C041-03; C11D001-29; C11D001-72;  
 C08G065-20; C08G065-32; D06M013-17; D06M013-262; D06M015-53

ICA B01F017-42; B01F017-02

CC 40-9 (Textiles and Fibers)

Section cross-reference(s): 46

IT 26720-84-3P 26720-88-7P 148061-90-9P 203438-11-3P  
 215943-09-2P 215943-19-4P 215943-22-9P 215943-33-2P  
 215943-40-1P 215943-45-6P 215943-51-4P 215943-54-7P  
 215943-57-0P 215943-59-2P 215943-64-9P 215943-66-1P  
 215943-73-0P 215943-76-3P 215943-81-0P  
 215943-83-2P 215943-87-6P 215943-89-8P  
 215943-92-3P 215943-95-6P 215943-98-9P  
 215944-00-6P 215944-03-9P 215944-06-2P  
 215944-08-4P 215944-10-8P 216163-54-1P 216163-55-2P  
 (wetting agent for use in aqueous treatment baths for textile fibers)

L40 ANSWER 13 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:685352 HCAPLUS  
 DOCUMENT NUMBER: 130:19711  
 TITLE: Electroconductive polyaniline-based  
 electrolyte, its manufacture, and solid  
 electrolytic capacitor using the same  
 INVENTOR(S): Tatemori, Hiroshi; Yutani, Yuji; Tokai,  
 Masaya; Uno, Keiichi  
 PATENT ASSIGNEE(S): Toyobo Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE         |
|-------------|------|----------|-----------------|--------------|
| JP 10284350 | A2   | 19981023 | JP 1997-86621   | 1997<br>0404 |

PRIORITY APPLN. INFO.: JP 1997-86621  
 1997  
 0404

OTHER SOURCE(S): MARPAT 130:19711  
 AB The electrolyte comprises a polyaniline (derivative) composition containing a  
 protonic acid as a dopant, shows elec. conductivity  $\geq 10^{-9}$  S/cm, is  
 soluble in a doped state, and satisfies relationship  $Md/Pn \leq 2000$   
 [ $Md$  = mol. weight of dopant;  $Pn$  = number of protonic acid groups of  $pK_a$   
 (/mol.)  $\leq 4.0$ ]. The dopant may be represented by  
 $C_6R_1^{k'}(COCH_2CH_2OCH_2CH_2OR_1)_kSO_3H$  ( $R_1$  = H, C1-15 substituents;  $R_1'$   
 = H, substituents;  $k$  = 1-5;  $k'$  = 0-4;  $k + k' = 5$ ) or  
 $R_2O(CH_2CH_2O)_pSO_3H$  ( $R_2$  = C5-20 substituents;  $p$  = 1-5). The  
 electrolyte is manufactured by applying a solution containing the polyaniline  
 composition on a oxide-coated metal substrate and drying. A solid  
 electrolytic capacitor using the electrolyte is also claimed.  
 IT 13150-00-0P  
 (dopant; solvent-soluble doped polyaniline electrolyte for manufacture  
 of solid electrolytic capacitor by coating process)  
 RN 13150-00-0 HCAPLUS  
 CN Ethanol, 2-[2-[2-(dodecyloxy)ethoxy]ethoxy]-, hydrogen sulfate,  
 sodium salt (7CI, 8CI, 9CI) (CA INDEX NAME)

Me-(CH<sub>2</sub>)<sub>11</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

IC ICM H01G009-028  
 ICS H01G009-00  
 CC 76-10 (Electric Phenomena)  
 Section cross-reference(s): 38  
 IT 13150-00-0P 178374-58-8P  
 (dopant; solvent-soluble doped polyaniline electrolyte for manufacture  
 of solid electrolytic capacitor by coating process)

L40 ANSWER 14 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:574681 HCAPLUS

DOCUMENT NUMBER: 129:317960

TITLE: Study on the physicochemical properties of the hydroxylpropoxylated sulfonate surfactant and its complexed systems

AUTHOR(S): Lu, Shaofen; Zou, Zhichen; Hao, Jingcheng; Zhang, Guangyou

CORPORATE SOURCE: Department of Chemistry, Shandong Normal University, Ji'nan, 250014, Peop. Rep. China

SOURCE: Riyong Huaxue Gongye (1997), (6), 1-6

CODEN: RHGOE8; ISSN: 1001-1803

PUBLISHER: Qinggongyebu Kexue Jishu Qingbao Yanjiuso

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB The new hydroxylpropoxylated sulfonate surfactant ROEnPmSO<sub>3</sub>Na (E = OCH<sub>2</sub>H<sub>2</sub>, P = OCH<sub>2</sub>H(OH)CH<sub>2</sub>, R = C<sub>12</sub>H<sub>25</sub>, C<sub>16</sub>H<sub>33</sub>, n = 0, 1, 2, 3, m = 0, 1) were synthesized. The physicochem. properties of the surfactant systems and their complexed systems were studied. The surface activity increased when hydroxylpropyl was introduced, and the Ca soap dispersing force was significantly increased. The efficacy of a hydroxylpropyl had the advantage over oxyethyl group.

IT 3088-31-1P 13150-00-0P 15826-16-1P

25446-80-4P 43168-25-8P

(surfactant; physicochem. properties of ethoxylated propoxylated sulfonates surfactants and their complexed systems)

RN 3088-31-1 HCAPLUS

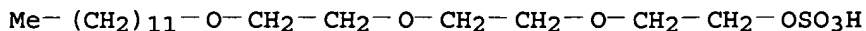
CN Ethanol, 2-[2-(dodecyloxy)ethoxy]-, hydrogen sulfate, sodium salt (7CI, 8CI, 9CI) (CA INDEX NAME)



● Na

RN 13150-00-0 HCAPLUS

CN Ethanol, 2-[2-[2-(dodecyloxy)ethoxy]ethoxy]-, hydrogen sulfate, sodium salt (7CI, 8CI, 9CI) (CA INDEX NAME)



● Na

RN 15826-16-1 HCAPLUS

CN Ethanol, 2-(dodecyloxy)-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



Me- (CH<sub>2</sub>)<sub>11</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

RN 25446-80-4 HCAPLUS

CN Ethanol, 2-[2-[2-(tetradecyloxy)ethoxy]ethoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)

Me- (CH<sub>2</sub>)<sub>13</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

RN 43168-25-8 HCAPLUS

CN Ethanol, 2-[2-[2-(hexadecyloxy)ethoxy]ethoxy]-, hydrogen sulfate, sodium salt (6CI, 9CI) (CA INDEX NAME)

Me- (CH<sub>2</sub>)<sub>15</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

CC 46-4 (Surface Active Agents and Detergents)

IT 151-21-3P, uses 3088-31-1P 7308-04-5P

13150-00-0P 15826-16-1P 25446-80-4P

43168-25-8P 146293-47-2P 146293-48-3P 146293-50-7P

146293-52-9P

(surfactant; physicochem. properties of ethoxylated propoxylated sulfonates surfactants and their complexed systems)

L40 ANSWER 15 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:407706 HCAPLUS

DOCUMENT NUMBER: 129:137267

TITLE: Alkali permeation aids for rapid permeation of alkali solutions by polyester fibers for finishing the fibers for weight loss and improved drape and luster

INVENTOR(S): Nagao, Shigeru; Okuno, Takashi; Kakito, Yukio

PATENT ASSIGNEE(S): Kao Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE  | APPLICATION NO. | DATE |
|------------|------|-------|-----------------|------|
| -----      | ---- | ----- | -----           |      |
| -----      |      |       |                 |      |



DOCUMENT TYPE: CODEN: USXXAM  
 LANGUAGE: Patent  
 FAMILY ACC. NUM. COUNT: English  
 1  
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE         |
|------------|------|----------|-----------------|--------------|
| US 5747435 | A    | 19980505 | US 1996-682494  | 1996<br>0717 |

PRIORITY APPLN. INFO.: <--  
 US 1996-682494  
 1996  
 0717

AB Composition useful as 2-in-1 cleansing **products** are disclosed that are extremely mild to skin and hair, which use neutralized, essentially chargeless, ionic complexes of fatty amines and fatty acids to deliver various levels of conditioning; neutralized, essentially chargeless, ionic complexes of a deterative **surfactant** comprising a water soluble cationic **surfactant** and/or polymer complexed with one or more anionic **surfactants**; or an amphoteric **surfactant** complexed with one or more anionic **surfactants**; or a water soluble cationic **surfactant** and/or polymer complexed with one or more amphoteric **surfactants**; or a water soluble cationic **surfactant** and/or polymer complexed with one or more anionic **surfactants** and an amphoteric **surfactant**; deterative **surfactant-soluble** but water-insol. silicones or derivs. thereof; and water. These **products** exhibit true 2-in- conditioning properties, and are lower in cost than current 2 in 1 **products**. Clear or opacified **products** can be formulated.

IT 3088-31-1  
 (mild foaming and conditioning detergents)

RN 3088-31-1 HCAPLUS

CN Ethanol, 2-[2-(dodecyloxy)ethoxy]-, hydrogen sulfate, sodium salt (7CI, 8CI, 9CI) (CA INDEX NAME)

Me- (CH<sub>2</sub>)<sub>11</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

IC ICM C11D001-12

ICS C11D001-88; C11D001-94; C11D009-36

INCL 510119000

CC 46-6 (Surface Active Agents and Detergents)

Section cross-reference(s): 62

ST shampoo conditioning **surfactant** anionic amphoteric  
 hydrotrope

IT **Surfactants**

(amphoteric; mild foaming and conditioning detergents)

IT Hydrotropes

**Surfactants**

(anionic; mild foaming and conditioning detergents)

IT 112-92-5, Stearyl alcohol 3088-31-1 9002-92-0D,  
 carboxylic derivs. 9016-00-6, Dimethylsilanediol homopolymer,  
 sru 24991-55-7, Polyethylene glycol dimethyl ether 25322-68-3  
 25322-69-4D, Polypropylene glycol, siloxane derivs. 26590-05-6  
 28348-53-0, Sodium cumenesulfonate 31900-57-9,  
 Dimethylsilanediol homopolymer 36574-66-0D, cocoamido derivs.  
 67799-04-6, Isostearamidopropyldimethylamine 81859-24-7,  
 Polyquaternium 10 135843-95-7, Polypropylene glycol oleate  
 207133-53-7

(mild foaming and conditioning detergents)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L40 ANSWER 17 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1997:175059 HCAPLUS

DOCUMENT NUMBER: 126:173389

TITLE: Branched chain ethoxylated alcohols and  
 sulfates and their use in detergent  
 formulations, cleaners, and brighteners

INVENTOR(S): Sauer, Joe D.; Zaweski, Edward F.; Tuvell,  
 Melvin E.; Trowbridge, Francis A.; Bunch,  
 David W.

PATENT ASSIGNEE(S): Albemarle Corporation, USA

SOURCE: PCT Int. Appl., 20 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|------|-----------------|------|
|------------|------|------|-----------------|------|

|            |    |          |                 |              |
|------------|----|----------|-----------------|--------------|
| WO 9700843 | A1 | 19970109 | WO 1996-US10634 | 1996<br>0620 |
|------------|----|----------|-----------------|--------------|

&lt;--

W: CA, JP

RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC,

NL, PT, SE

|            |    |          |                 |              |
|------------|----|----------|-----------------|--------------|
| CA 2225339 | AA | 19970109 | CA 1996-2225339 | 1996<br>0620 |
|------------|----|----------|-----------------|--------------|

&lt;--

|           |    |          |                |              |
|-----------|----|----------|----------------|--------------|
| EP 846094 | A1 | 19980610 | EP 1996-921717 | 1996<br>0620 |
|-----------|----|----------|----------------|--------------|

&lt;--

|                   |    |          |                |              |
|-------------------|----|----------|----------------|--------------|
| EP 846094         | B1 | 20010425 |                |              |
| R: DE, FR, GB, IT |    |          |                |              |
| JP 11508261       | T2 | 19990721 | JP 1996-503948 | 1996<br>0620 |

&lt;--

PRIORITY APPLN. INFO.: US 1995-493189 A

1995  
0620

<--  
 WO 1996-US10634      W  
 1996  
 0620  
 <--

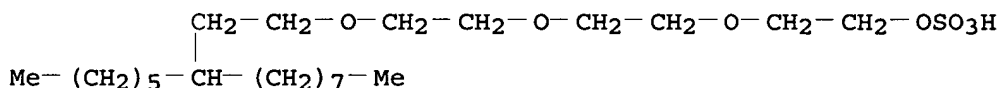
OTHER SOURCE(S):      MARPAT 126:173389

AB    Certain branched chain compds. such as double-tailed alc.  
 ethoxylates  $R_z(OC_2H_4)_wOH$  ( $R$  = alkyl branched in 3 position with  
 each branch an C1-4-alkyl;  $z$  = number C atoms in  $R$  15-33,  $w$  = 1-6.5)  
 and double-tailed alc. ether sulfates  $R_zO(C_2H_4O)_wSO_3M$  ( $M$  = alkali  
 metal, ammonium, or alkylolammonium) are prepared. Thus,  
 3-hexyl-1-undecanol was either ethoxylated (KOH catalyzed) or  
 treated (Cl-containing intermediate) with triethylene glycol  
 (Williamson ether synthesis) to give a surfactant, b.  
 187-197°, and readily converted to the sulfate.

IT    183237-64-1P  
       (branched chain ethoxylated alcs. and sulfates and their use in  
       detergent formulations, cleaners, and brighteners)

RN    183237-64-1    HCAPLUS

CN    Ethanol, 2-[2-[2-[(3-hexylundecyl)oxy]ethoxy]ethoxy]-, hydrogen  
 sulfate, sodium salt (9CI)    (CA INDEX NAME)



● Na

IC    ICM    C07C043-11  
       ICS    C07C305-06

ICA    C11D001-29

CC    46-3 (Surface Active Agents and Detergents)  
       Section cross-reference(s): 23

IT    183237-57-2P    183237-63-0P    183237-64-1P  
       (branched chain ethoxylated alcs. and sulfates and their use in  
       detergent formulations, cleaners, and brighteners)

L40    ANSWER 18 OF 50    HCAPLUS    COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:      1997:9920    HCAPLUS

DOCUMENT NUMBER:      126:105773

TITLE:                    Cleaner/degreaser concentrate compositions

INVENTOR(S):            Van, Eenam Donald N.

PATENT ASSIGNEE(S):      Buckeye International, Inc., USA

SOURCE:                  U.S., 17 pp.  
                               CODEN: USXXAM

DOCUMENT TYPE:          Patent

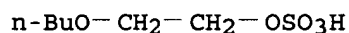
LANGUAGE:                English

FAMILY ACC. NUM. COUNT:    1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE         |
|------------|------|----------|-----------------|--------------|
| -----      | ---- | -----    | -----           |              |
| US 5585341 | A    | 19961217 | US 1995-394797  | 1995<br>0227 |

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          |                |                    |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------|--------------------|
| US 5849682             | A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 19981215 | US 1996-714880 | 1996<br>0917       |
|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          | <--            |                    |
| US 6423677             | B1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 20020723 | US 2001-951858 | 2001<br>0913       |
|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          | <--            |                    |
| PRIORITY APPLN. INFO.: |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          | US 1995-394797 | A3<br>1995<br>0227 |
|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          | <--            |                    |
|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          | US 1996-714880 | A3<br>1996<br>0917 |
|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          | <--            |                    |
|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          | US 1998-151101 | B1<br>1998<br>0910 |
|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          | <--            |                    |
| AB                     | <p>Nonaq. concs. for use in <b>preparing</b> stable, aqueous cleaner/degreaser compns. in the form of totally water sol . solns. comprise (a) 1-phenoxy-2-propanol, (b) a <b>solubilizing</b> additive consisting of 0.1-100% of a <b>surfactant</b> and 0-99.9% of a coupler, the <b>solubilizing</b> additive being present in an amount of 3-15% excess over that minimally required to form a clear solution when the concentrate is combined with water, and (c) no added water; where the concentrate forming a barely clear, totally water <b>soluble</b> solution when diluted with water to <b>produce</b> a solution having the desired cleaning/degreasing strength. The <b>surfactants</b> can be anionic, cationic, nonionic, or amphoteric <b>surfactants</b>.</p> |          |                |                    |
| IT                     | <p>67656-24-0<br/>(cleaner/degreaser concentrate compns.)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                |                    |
| RN                     | <p>67656-24-0 HCAPLUS</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |                |                    |
| CN                     | <p>Ethanol, 2-butoxy-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |                |                    |



● Na

```

IC      ICM      C11D001-86
        ICS      C11D001-94; C11D003-43
INCL    510365000
CC      46-6 (Surface Active Agents and Detergents)
ST      phenoxypropanol degreaser cleaner conc; surfactant
        degreaser cleaner
IT      Degreasing agents
        Detergents
        Surfactants
        (cleaner/degreaser concentrate compns.)
IT      60-12-8,  $\beta$ -Phenylethanol 62-53-3, Aniline, uses 78-59-1,
        Isophorone 94-96-2, 2-Ethyl-1,3-hexanediol 100-51-6, Benzyl

```

alcohol, uses 100-52-7, Benzaldehyde, uses 100-71-0,  
 2-Ethylpyridine 102-71-6, uses 107-43-7D, Betaine,  
 cocoamidopropyl 107-95-9D,  $\beta$ -Aminopropionic acid, N-coco  
 110-91-8D, Morpholine, tall oil fatty acid salts, uses 120-40-1,  
 Lauric diethanolamide 122-99-6, 126-73-8, Tri-n-butyl  
 phosphate, uses 142-15-4 143-00-0, Diethanolamine lauryl  
 sulfate 143-19-1, Sodium oleate 151-21-3, Sodium lauryl  
 sulfate, uses 513-08-6, Tri-n-propylphosphate 515-42-4, Sodium  
 benzene sulfonate 636-72-6, 2-Thiophenemethanol 657-84-1,  
 Sodium toluene sulfonate 770-35-4, 1-Phenoxy-2-propanol  
 1300-72-7, Sodium xylene sulfonate 1331-61-9, Ammonium  
 dodecylbenzene sulfonate 1696-17-9, N,N-Diethylbenzamide  
 1875-92-9D, Dimethyl benzyl ammonium chloride, alkyl derivs.  
 2168-93-6, n-Butyl sulfoxide 2390-68-3, Didecyltrimethylammonium  
 bromide 3655-00-3 5197-80-8D, Dimethyl ethylbenzyl ammonium  
 chloride, alkyl derivs. 5324-84-5, Sodium octane-1-sulfonate  
 9002-92-0 9002-93-1, Triton X-102 9004-81-3 9004-82-4,  
 Sodium laureth(3) sulfate 9005-67-8 9014-92-0 9016-45-9,  
 T-Det N-14 9063-06-3 9063-89-2 10124-65-9, Potassium laurate  
 12068-08-5, Morpholinium dodecylbenzene sulfonate 14047-60-0,  
 Sodium pelargonate 15015-81-3, Sodium hexadecane-1 sulfonate  
 19766-89-3, Sodium 2-ethylhexanoate 24938-91-8 25155-30-0,  
 Sodium dodecylbenzene sulfonate 25339-99-5, Sucrose monolaurate  
 26248-24-8, Sodium tridecylbenzene sulfonate 26264-05-1,  
 Isopropylamine dodecylbenzene sulfonate 26447-10-9, Ammonium  
 xylene sulfonate 26635-75-6 26764-43-2 26896-18-4,  
 Isononanoic acid 27140-00-7 27176-87-0, Dodecylbenzenesulfonic  
 acid 27177-77-1, Potassium dodecylbenzene sulfonate  
 27177-78-2, Sodium dinonylbenzene sulfonate 27323-41-7  
 28348-53-0, Sodium cumene sulfonate 28519-02-0, Sodium dodecyl  
 diphenyloxide disulfonate 29062-31-5, Potassium didodecylbenzene  
 sulfonate 29911-28-2 30260-72-1 34448-38-9 35884-42-5,  
 Dipropylene glycol butyl ether 38815-93-9 41669-40-3,  
 Triethanolamine myristate 50660-84-9 53694-15-8D, Polyethylene  
 glycol sorbitol ether, tall oil fatty acid esters 55196-97-9  
 56637-93-5 61168-61-4, Potassium ethylbenzene sulfonate  
 61792-31-2 61926-71-4 65060-02-8, Hexadecyltrimethylammonium  
 methosulfate 67656-24-0 68877-55-4, Monateric CY-Na-50  
 85409-98-9, Potassium dimethylnaphthalene sulfonate 94668-42-5,  
 Potassium octadecenylsuccinate 103657-84-7 104977-48-2  
 107227-50-9 126776-61-2, Monafax 057 128664-37-9, APG 300  
 131744-02-0 132268-32-7, Tomah Q-17-2 134267-38-2  
 135945-21-0, Monafax 939 142985-93-1, Monamine ALX-100S  
 143478-87-9, Bioterge PAS-8S 185224-64-0 185224-65-1  
 185325-51-3 185353-69-9

(cleaner/degreaser concentrate compns.)

L40 ANSWER 19 OF 50 HCAPLUS · COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:637496 HCAPLUS

DOCUMENT NUMBER: 125:303841

TITLE: Formulated branched chain alcohol ether  
sulfate compounds

INVENTOR(S): Hu, Patrick C.; Corona, Raynold J.

PATENT ASSIGNEE(S): Albemarle Corporation, USA

SOURCE: U.S., 6 pp.  
CODEN: USXXAM

DOCUMENT TYPE: Patent

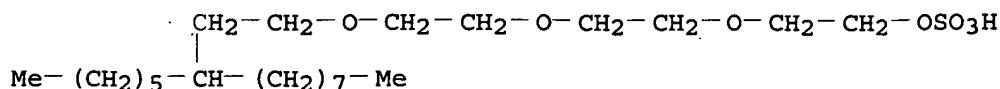
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.                                                                             | KIND                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | DATE     | APPLICATION NO. | DATE              |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------|-------------------|
| US 5562866                                                                             | A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 19961008 | US 1995-493186  | 1995<br>0620      |
| CA 2225340                                                                             | AA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 19970109 | CA 1996-2225340 | 1996<br>0620      |
| WO 9700720                                                                             | A1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 19970109 | WO 1996-US10639 | 1996<br>0620      |
| W: CA, JP<br>RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC,<br>NL, PT, SE |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |                 |                   |
| EP 846025                                                                              | A1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 19980610 | EP 1996-919477  | 1996<br>0620      |
| EP 846025                                                                              | B1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 20000202 |                 |                   |
| R: DE, FR, GB, IT                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |                 |                   |
| JP 11508306                                                                            | T2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 19990721 | JP 1996-503950  | 1996<br>0620      |
| PRIORITY APPLN. INFO.:                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |                 |                   |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          | US 1995-493186  | A<br>1995<br>0620 |
|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          | WO 1996-US10639 | W<br>1996<br>0620 |
| OTHER SOURCE(S): MARPAT 125:303841                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |                 |                   |
| AB                                                                                     | Predominately aqueous surfactant formulations comprise: (A) $\geq 1$ alc. ether sulfate $R_zO(C_2H_4O)_wSO_3M$ where R is an alkyl group which is bifurcated at the 3-position and each branch has at least 4 carbon atoms; M is an alkali metal, ammonium; z is 15-33; and w is 1-6.5 or an average in the range of 1-6.5; and (B) $\geq 1$ hydrotrope or $\geq 1$ cosurfactant, or a combination of $\geq 1$ hydrotrope and $\geq 1$ cosurfactant. The formulations are useful for various surfactant utilities including use in hard water systems. |          |                 |                   |
| IT                                                                                     | 183237-64-1P<br>(formulated branched chain alc. ether sulfate compds.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |          |                 |                   |
| RN                                                                                     | 183237-64-1 HCAPLUS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                 |                   |
| CN                                                                                     | Ethanol, 2-[2-[2-[(3-hexylundecyl)oxy]ethoxy]ethoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)                                                                                                                                                                                                                                                                                                                                                                                                                                             |          |                 |                   |





● Na

IC ICM C11D001-14  
 INCL 510432000  
 CC 46-4 (Surface Active Agents and Detergents)  
 IT 183237-64-1P  
 (formulated branched chain alc. ether sulfate compds.)

L40 ANSWER 20 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:509562 HCAPLUS

DOCUMENT NUMBER: 125:225094

TITLE: Effect of Hard River Water on the Surface Properties of **Surfactants**

AUTHOR(S): Rosen, Milton J.; Zhu, Yun-Peng; Morrall, Stephen W.

CORPORATE SOURCE: Brooklyn College, City University of New York, Brooklyn, NY, 11210, USA

SOURCE: Journal of Chemical and Engineering Data (1996), 41(5), 1160-1167

CODEN: JCEAAX; ISSN: 0021-9568

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The surface properties [effectiveness of surface tension reduction ( $\gamma_{\text{CMC}}$ ), critical micelle concentration (CMC), efficiency of surface tension reduction (pC20), maximum surface excess concentration ( $\Gamma_{\text{max}}$ ), min. area/mol. at the interface (Amin), and the (CMC/C20) ratio] of well-purified anionic, nonionic, and cationic **surfactants**, some of which are widely used in daily chemical and industrial **products**, were investigated at 25 °C in hard river water. The studied **surfactants** show somewhat greater surface activity in hard river water than in distilled water, but in particular, for anionic **surfactants** a marked effect of hard river water on surface active properties was observed. The effect of hard river water on surface active properties is, in decreasing order, anionics > cationics > nonionics. For alkyl poly(oxyethylene glycol)s, the effect on surface properties is interpreted in terms of complex formation between the ether oxygen atoms of the poly(oxyethylene) group and divalent hardness ions. The linear relationship between the pC20 or CMC values and the number of carbon atoms in the alkyl chain observed in distilled water was confirmed in hard river water. For alkyl poly(oxyethylene sulfate)s, the slope of the plot indicates an effect of the alkyl chain on adsorption at the air/water interface or on micellization similar to that observed for nonionic **surfactants** in distilled water.

IT 3088-31-1, Diethylene glycol monododecyl ether sulfate sodium salt 3694-74-4, Ethylene glycol monotetradecyl ether sulfate sodium salt 15826-16-1, Ethylene glycol monododecyl ether sulfate sodium salt 15826-19-4, Tetraethylene glycol monododecyl ether sodium sulfate 24895-01-0, Ethylene glycol monopentadecyl ether sulfate

sodium salt 26482-91-7, Diethylene glycol monotetradecyl  
ether sulfate sodium salt 148909-91-5, Tetraethylene  
glycol monotetradecyl ether sulfate sodium salt  
181370-55-8

(effect of hard river water on the surface properties of  
surfactants)

RN 3088-31-1 HCAPLUS

CN Ethanol, 2-[2-(dodecyloxy)ethoxy]-, hydrogen sulfate, sodium salt  
(7CI, 8CI, 9CI) (CA INDEX NAME)

$\text{Me}-(\text{CH}_2)_{11}-\text{O}-\text{CH}_2-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}_2-\text{OSO}_3\text{H}$

● Na

RN 3694-74-4 HCAPLUS

CN Ethanol, 2-(tetradecyloxy)-, hydrogen sulfate, sodium salt (7CI,  
8CI, 9CI) (CA INDEX NAME)

$\text{Me}-(\text{CH}_2)_{13}-\text{O}-\text{CH}_2-\text{CH}_2-\text{OSO}_3\text{H}$

● Na

RN 15826-16-1 HCAPLUS

CN Ethanol, 2-(dodecyloxy)-, hydrogen sulfate, sodium salt (9CI) (CA  
INDEX NAME)

$\text{Me}-(\text{CH}_2)_{11}-\text{O}-\text{CH}_2-\text{CH}_2-\text{OSO}_3\text{H}$

● Na

RN 15826-19-4 HCAPLUS

CN 3,6,9,12-Tetraoxatetracosan-1-ol, hydrogen sulfate, sodium salt  
(6CI, 8CI, 9CI) (CA INDEX NAME)

$\text{Me}-(\text{CH}_2)_{11}-\text{O}-\text{CH}_2-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}_2-\text{OSO}_3\text{H}$

● Na

RN 24895-01-0 HCAPLUS

CN Ethanol, 2-(pentadecyloxy)-, hydrogen sulfate, sodium salt (8CI,  
9CI) (CA INDEX NAME)

Me- (CH<sub>2</sub>)<sub>14</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

RN 26482-91-7 HCAPLUS  
CN Ethanol, 2-[2-(tetradecyloxy)ethoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)

Me- (CH<sub>2</sub>)<sub>13</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

RN 148909-91-5 HCAPLUS  
CN 3,6,9,12-Tetraoxahexacosan-1-ol, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)

Me- (CH<sub>2</sub>)<sub>13</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

RN 181370-55-8 HCAPLUS  
CN 3,6,9,12-Tetraoxaheptacosan-1-ol, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)

Me- (CH<sub>2</sub>)<sub>14</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

CC 46-3 (Surface Active Agents and Detergents)  
Section cross-reference(s): 61, 68  
ST cationic **surfactant** CMC hard river water; nonionic  
**surfactant** CMC hard river water; anionic  
**surfactant** CMC hard river water; surface property hard  
river water  
IT Adsorption  
Micelles  
(effect of hard river water on the surface properties of  
**surfactants**)  
IT Surface area  
(min.; effect of hard river water on the surface properties of  
**surfactants**)  
IT **Surfactants**  
(anionic, effect of hard river water on the surface properties  
of **surfactants**)

IT **Surfactants**  
(cationic, effect of hard river water on the surface properties of **surfactants**)

IT **Surfactants**  
(nonionic, effect of hard river water on the surface properties of **surfactants**)

IT 151-21-3, Sodium dodecylsulfate, properties 577-11-7, Sodium bis(ethylhexyl) sulfosuccinate 871-95-4, Dimethyldodecylphosphine oxide 1119-94-4, Dodecyltrimethylammonium bromide 1119-97-7, Tetradecyltrimethylammonium bromide 1191-50-0, Sodium tetradecylsulfate 2082-84-0, Decyltrimethylammonium bromide 2190-95-6, Dimethyldecylphosphine oxide 2386-53-0, Sodium dodecylsulfonate 2534-65-8, N-Decylpyridinium bromide 2687-94-7, N-Octylpyrrolidinone 2687-96-9, N-Dodecylpyrrolidinone 3088-31-1, DiEthylene glycol monododecyl ether sulfate sodium salt 3694-74-4, Ethylene glycol monotetradecyl ether sulfate sodium salt 5157-04-0, Hexaethylene glycol tetradecyl ether 5168-89-8, Hexaethylene glycol decyl ether 5168-91-2, Hexaethylene glycol hexadecyl ether 5274-68-0, Tetraethylene glycol dodecyl ether 13393-71-0, Sodium pentadecylsulfate 15826-16-1, Ethylene glycol monododecyl ether sulfate sodium salt 15826-19-4, Tetraethylene glycol monododecyl ether sodium sulfate 24895-01-0, Ethylene glycol monopentadecyl ether sulfate sodium salt 26482-91-7, Diethylene glycol monotetradecyl ether sulfate sodium salt 27847-86-5, Octaethylene glycol monotetradecyl ether 39034-24-7, Tetraethylene glycol tetradecyl ether 39516-24-0, Dodecane-1,3-diol 55257-88-0 56029-36-8, Dimethylnonylphosphine oxide 66397-78-2, N-(2-Ethylhexyl)pyrrolidinone 70679-32-2, Potassium decylsulfonate 148909-91-5, Tetraethylene glycol monotetradecyl ether sulfate sodium salt 181370-55-8  
(effect of hard river water on the surface properties of **surfactants**)

L40 ANSWER 21 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:317077 HCAPLUS

DOCUMENT NUMBER: 125:42424

TITLE: The interaction of some novel diquatertiary gemini **surfactants** with anionic **surfactants**

AUTHOR(S): Liu, Letian; Rosen, Milton J.

CORPORATE SOURCE: Surfactant Res. Inst., CUNY, Brooklyn, NY, 11210, USA

SOURCE: Journal of Colloid and Interface Science (1996), 179(2), 454-459

CODEN: JCISA5; ISSN: 0021-9797

PUBLISHER: Academic

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The interactins of a series of novel cationic gemini **surfactants**,  $[\text{CnH}_{2n+1}(\text{CH}_3)_2\text{N}+\text{CH}_2\text{CHOHCHOHCH}_2(\text{CH}_3)_2\text{N}+\text{CnH}_{2n+1}]_2\text{Br}^-$  (symbolized  $(\text{CnN})_2$ ), with conventional **surfactants** (containing a single hydrophilic and a single hydrophobic group in the mol.) were studied.  $(\text{C}_8\text{N})_2$  and  $(\text{C}_{10}\text{N})_2$  have very strong interactins with the anionic **surfactants**  $\text{C}_{10}\text{H}_{21}\text{SO}_3\text{Na}$ ,  $\text{C}_{12}\text{H}_{25}\text{SO}_3\text{Na}$ , and  $\text{C}_{12}\text{H}_{25}(\text{C}_2\text{H}_4\text{O})_4\text{SO}_4\text{Na}$ , producing marked synergism in surface tension reduction efficiency and effectiveness

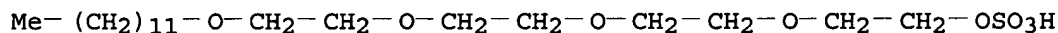
and in mixed micelle formation in H<sub>2</sub>O, 0.1 M NaBr, and 0.1 M NaCl. In contrast, (C<sub>12</sub>N)<sub>2</sub> shows no synergism at all with C<sub>12</sub>H<sub>25</sub>SO<sub>3</sub>Na and has a much weaker synergistic interaction with C<sub>12</sub>H<sub>25</sub>(C<sub>2</sub>H<sub>4</sub>O)<sub>4</sub>SO<sub>4</sub>Na. Extraordinarily strong interaction between the (C<sub>12</sub>N)<sub>2</sub> and C<sub>12</sub>H<sub>25</sub>SO<sub>3</sub>Na produces small, sol ., nonmicellar aggregates (having no surface activity) that decrease the monomer concns. of the component **surfactants**, thereby reducing the surface activity of the system. Equilibrium constant calcns. for this aggregate formation indicate that the 2 **surfactants** are present in a 1:1 molar ratio.

IT 15826-19-4, Sodium tetraethylene glycol dodecyl ether sulfate

(cationic diquaternary gemini **surfactant** interactions with anionic **surfactants** and synergism in surface tension reduction and in mixed micelle formation)

RN 15826-19-4 HCAPLUS

CN 3,6,9,12-Tetraoxatetracosan-1-ol, hydrogen sulfate, sodium salt (6CI, 8CI, 9CI) (CA INDEX NAME)



● Na

CC 66-2 (Surface Chemistry and Colloids)

Section cross-reference(s): 22, 46

ST mixed micelle diquaternary gemini anionic **surfactant**;  
surface tension cationic gemini anionic **surfactant**

IT Chains, chemical

Micelles

Surface tension

**Surfactants**

(cationic diquaternary gemini **surfactant** interactions with anionic **surfactants** and synergism in surface tension reduction and in mixed micelle formation)

IT Quaternary ammonium compounds, properties

(di-, bromides; cationic diquaternary gemini **surfactant** interactions with anionic **surfactants** and synergism in surface tension reduction and in mixed micelle formation)

IT 142-87-0, Sodium decyl sulfate 151-21-3, SDS, properties  
15826-19-4, Sodium tetraethylene glycol dodecyl ether sulfate 178061-56-8 178061-57-9 178061-58-0

(cationic diquaternary gemini **surfactant** interactions with anionic **surfactants** and synergism in surface tension reduction and in mixed micelle formation)

L40 ANSWER 22 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:307744 HCAPLUS

DOCUMENT NUMBER: 124:320176

TITLE: Transparent personal cleansing bar

INVENTOR(S): Wiegand, Benjamin Carl; Figueroa, Alejandro;  
Brunsman, Michael August; Zyngier, Alexandre

PATENT ASSIGNEE(S): Procter and Gamble Company, USA

SOURCE: PCT Int. Appl., 30 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

| PATENT NO.                                                                                                                                                            | KIND                                                                                                                                                                                                                                                                                                                                           | DATE     | APPLICATION NO. | DATE              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------|-------------------|
| WO 9604361                                                                                                                                                            | A1                                                                                                                                                                                                                                                                                                                                             | 19960215 | WO 1995-US9437  | 1995<br>0726      |
| <--                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                |          |                 |                   |
| W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TT, UA, UZ, VN |                                                                                                                                                                                                                                                                                                                                                |          |                 |                   |
| RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG                        |                                                                                                                                                                                                                                                                                                                                                |          |                 |                   |
| CA 2196612                                                                                                                                                            | AA                                                                                                                                                                                                                                                                                                                                             | 19960215 | CA 1995-2196612 | 1995<br>0726      |
| <--                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                |          |                 |                   |
| CA 2196612                                                                                                                                                            | C                                                                                                                                                                                                                                                                                                                                              | 20011218 |                 |                   |
| AU 9532009                                                                                                                                                            | A1                                                                                                                                                                                                                                                                                                                                             | 19960304 | AU 1995-32009   | 1995<br>0726      |
| <--                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                |          |                 |                   |
| EP 775195                                                                                                                                                             | A1                                                                                                                                                                                                                                                                                                                                             | 19970528 | EP 1995-928144  | 1995<br>0726      |
| <--                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                |          |                 |                   |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE                                                                                                     |                                                                                                                                                                                                                                                                                                                                                |          |                 |                   |
| CN 1157633                                                                                                                                                            | A                                                                                                                                                                                                                                                                                                                                              | 19970820 | CN 1995-195085  | 1995<br>0726      |
| <--                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                |          |                 |                   |
| JP 10504336                                                                                                                                                           | T2                                                                                                                                                                                                                                                                                                                                             | 19980428 | JP 1995-506592  | 1995<br>0726      |
| <--                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                |          |                 |                   |
| BR 9508501                                                                                                                                                            | A                                                                                                                                                                                                                                                                                                                                              | 19981103 | BR 1995-8501    | 1995<br>0726      |
| <--                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                |          |                 |                   |
| HU 78015                                                                                                                                                              | A2                                                                                                                                                                                                                                                                                                                                             | 19990528 | HU 1997-312     | 1995<br>0726      |
| <--                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                |          |                 |                   |
| PRIORITY APPLN. INFO.:                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                |          | US 1994-285261  | A<br>1994<br>0803 |
| <--                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                |          |                 |                   |
|                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                |          | WO 1995-US9437  | W<br>1995<br>0726 |
| <--                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                |          |                 |                   |
| AB                                                                                                                                                                    | A monohydric alc.-free process for making transparent pour molded personal cleansing bars of good hardness comprises (I) making a molten mixture of 18-35 parts soap, wherein the soap $\geq 50\%$ insol. Na soap; 14-32 parts H <sub>2</sub> O; 5-37 parts synthetic surfactant of critical micelle concentration equilibrium surface tension |          |                 |                   |

10-50 dynes/cm; and 18-37 parts H<sub>2</sub>O-soluble organic solvent, wherein the combined level of H<sub>2</sub>O and H<sub>2</sub>O-soluble organic solvent within the molten mixture  $\geq 40$  parts; and (II) transferring the mixture to a mold, and (III) allowing the molded unit to cool in acquiescent conditions into a mild, low-smearing transparent personal cleansing bar. Bars made by the process are more weight stable than bars made with several parts of alc. Bar processing time is substantially reduced by faster crystallization and faster bar stabilization. A bar soap was made from babassu soap 10.5, hardened tallow soap 19.5, triple pressed fatty acid 0.5, propylene glycol 11.0, dipropylene glycol 5.5, glycerin 6.0, Na lauryl ethoxy sulfate 12.0, Na lauryl sulfate 3.0, coco betaine 2.0, NaCl 1.5, sugar 2.0, water 24.3, and other additives 2.2 parts.

- IT 13150-00-0, Sodium lauryl triethoxy sulfate  
(transparent personal cleansing bar containing water/solvent mixture, soap, and surfactant free of volatile alcs.)
- RN 13150-00-0 HCAPLUS
- CN Ethanol, 2-[2-[2-(dodecyloxy)ethoxy]ethoxy]-, hydrogen sulfate, sodium salt (7CI, 8CI, 9CI) (CA INDEX NAME)

Me-(CH<sub>2</sub>)<sub>11</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

- IC ICM C11D017-00  
ICS C11D010-04; C11D003-30; C11D003-20
- CC 46-2 (Surface Active Agents and Detergents)
- ST soap bar transparent alc free; surfactant water glycol solvent bar soap
- IT Sulfonic acids, uses  
(alkylglyceryl ether ester; transparent personal cleansing bar containing water/solvent mixture, soap, and surfactant free of volatile alcs.)
- IT Babassu palm  
(soap from; transparent personal cleansing bar containing water/solvent mixture, soap, and surfactant free of volatile alcs.)
- IT Surfactants  
(transparent personal cleansing bar containing water/solvent mixture, soap, and surfactant free of volatile alcs.)
- IT Soaps  
(bars, transparent personal cleansing bar containing water/solvent mixture, soap, and surfactant free of volatile alcs.)
- IT Fatty acids, uses  
(coco, transparent personal cleansing bar containing water/solvent mixture, soap, and surfactant free of volatile alcs.)
- IT Fatty acids, uses  
(tallow, transparent personal cleansing bar containing water/solvent mixture, soap, and surfactant free of volatile alcs.)
- IT 50-70-4, D-Glucitol, uses 56-81-5, 1,2,3-Propanetriol, uses 57-55-6, 1,2-Propanediol, uses 96-20-8, 2-Amino-1-butanol 102-71-6, uses 107-21-1, 1,2-Ethanediol, uses 111-42-2, uses 141-43-5, uses 151-21-3, Sodium lauryl sulfate, uses 629-30-1, 1,7-Heptanediol 7631-98-3, Sodium lauryl sarcosinate

13150-00-0, Sodium lauryl triethoxy sulfate 25265-71-8,  
 Dipropylene glycol 25265-75-2, Butylene glycol 25322-68-3  
 25322-69-4 26838-05-1  
 (transparent personal cleansing bar containing water/solvent mixture,  
 soap, and **surfactant** free of volatile alcs.)

L40 ANSWER 23 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

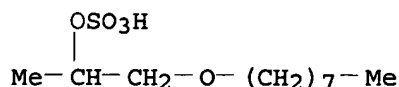
ACCESSION NUMBER: 1996:303961 HCAPLUS  
 DOCUMENT NUMBER: 124:320183  
 TITLE: (Octyloxy)propanols for use in surfactant  
 manufacture  
 INVENTOR(S): Schmid, Karl; Neus, Michael; Nitsche, Michael  
 PATENT ASSIGNEE(S): Henkel KGaA, Germany  
 SOURCE: Ger. Offen., 11 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.                                                                                                  | KIND | DATE     | APPLICATION NO. | DATE         |
|-------------------------------------------------------------------------------------------------------------|------|----------|-----------------|--------------|
| DE 4436066                                                                                                  | A1   | 19960411 | DE 1994-4436066 | 1994<br>1010 |
| WO 9611177                                                                                                  | A1   | 19960418 | WO 1995-DE1356  | 1995<br>1002 |
| EP 785918                                                                                                   | A1   | 19970730 | EP 1995-934041  | 1995<br>1002 |
| W: CN, KR, US<br>RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL,<br>PT, SE<br>R: DE, ES, FR, IT |      |          |                 |              |
| PRIORITY APPLN. INFO.:<br>DE 1994-4436066 A<br>WO 1995-DE1356 W                                             |      |          |                 |              |

OTHER SOURCE(S): MARPAT 124:320183

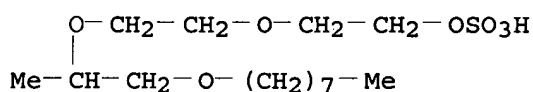
AB The alcs. ROCH<sub>2</sub>CH(Me)OH (R = branched or normal C<sub>8</sub> alkyl group),  
 containing <5% free octanol and useful for ethoxylation and sulfation  
 in surfactant manufacture, are prepared Heating 2 mol 1-octanol, 2-mol  
 propylene oxide, and 4 g NaOMe at 140° for 30 min and  
 vacuum distillation gave a nearly quant. yield of 1-(octyloxy)-2-  
 propanol (I) containing 0.9% free octanol. Sulfation and ethoxylation  
 of I are exemplified.  
 IT 176660-46-1P 176660-48-3P  
 (manufacture of, for use in detergents)  
 RN 176660-46-1 HCAPLUS  
 CN 2-Propanol, 1-(octyloxy)-, hydrogen sulfate, sodium salt (9CI)  
 (CA INDEX NAME)





● Na

RN 176660-48-3 HCAPLUS  
 CN Ethanol, 2-[2-[1-methyl-2-(octyloxy)ethoxy]ethoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



● Na

IC ICM C07C043-13  
 ICS C07C305-10; C07C303-24; C07C041-03; C11D001-722  
 CC 46-3 (Surface Active Agents and Detergents)  
 Section cross-reference(s): 23, 45  
 IT 37311-02-7P, Polyethylene-polypropylene glycol mono-octyl ether  
 176660-46-1P 176660-47-2P 176660-48-3P  
 (manufacture of, for use in detergents)

L40 ANSWER 24 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1993:171504 HCAPLUS

DOCUMENT NUMBER: 118:171504

TITLE: Ionic surfactants applicable in hard water

AUTHOR(S): Shinoda, Kozo; Shibata, Yutaka

CORPORATE SOURCE: Fac. Eng., Yokohama Natl. Univ., Yokohama, 240, Japan

SOURCE: Yukagaku (1993), 42(2), 81-5

CODEN: YKGKAM; ISSN: 0513-398X

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB Based on the phys. meaning of Krafft point, anionic surfactants with low Krafft points were synthesized. The surfactants could be used in hard water, brines, etc.

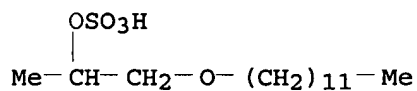
IT 14858-45-8P 14858-50-5P 14858-54-9P  
 14858-56-1P 15826-16-1P 41343-91-3P  
 63596-52-1P 72267-13-1P 72267-15-3P  
 74791-05-2P 74812-85-4P 94234-78-3P  
 100899-99-8P 100900-00-3P 100900-01-4P  
 100900-02-5P 100900-03-6P 100900-04-7P  
 116050-08-9P

(surfactants, preparation and Krafft point and critical micelle concentration of)

RN 14858-45-8 HCAPLUS

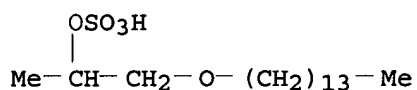
CN 2-Propanol, 1-(dodecyloxy)-, hydrogen sulfate, sodium salt (9CI)

(CA INDEX NAME)



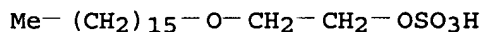
● Na

RN 14858-50-5 HCAPLUS  
CN 2-Propanol, 1-(tetradecyloxy)-, hydrogen sulfate, sodium salt  
(9CI) (CA INDEX NAME)



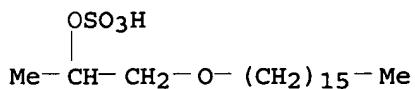
● Na

RN 14858-54-9 HCAPLUS  
CN Ethanol, 2-(hexadecyloxy)-, hydrogen sulfate, sodium salt (6CI,  
8CI, 9CI) (CA INDEX NAME)



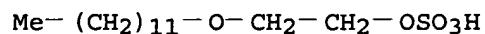
● Na

RN 14858-56-1 HCAPLUS  
CN 2-Propanol, 1-(hexadecyloxy)-, hydrogen sulfate, sodium salt (9CI)  
(CA INDEX NAME)



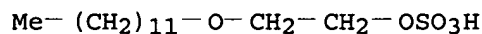
● Na

RN 15826-16-1 HCAPLUS  
CN Ethanol, 2-(dodecyloxy)-, hydrogen sulfate, sodium salt (9CI) (CA  
INDEX NAME)



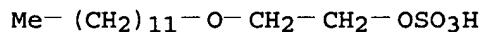
● Na

RN 41343-91-3 HCAPLUS  
CN Ethanol, 2-(dodecyloxy)-, hydrogen sulfate, calcium salt (9CI)  
(CA INDEX NAME)



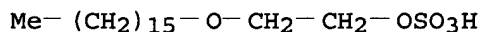
● 1/2 Ca

RN 63596-52-1 HCAPLUS  
CN Ethanol, 2-(dodecyloxy)-, hydrogen sulfate, magnesium salt (9CI)  
(CA INDEX NAME)



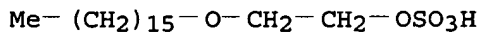
● 1/2 Mg

RN 72267-13-1 HCAPLUS  
CN Ethanol, 2-(hexadecyloxy)-, hydrogen sulfate, calcium salt (9CI)  
(CA INDEX NAME)



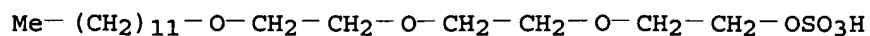
● 1/2 Ca

RN 72267-15-3 HCAPLUS  
CN Ethanol, 2-(hexadecyloxy)-, hydrogen sulfate, magnesium salt (9CI)  
(CA INDEX NAME)



● 1/2 Mg

RN 74791-05-2 HCAPLUS  
CN Propanol, [2-[2-(dodecyloxy)methylethoxy]methylethoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)

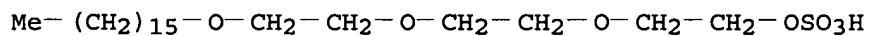


3 ( D1-Me )

● Na

RN 74812-85-4 HCAPLUS

CN Propanol, [2-[2-(hexadecyloxy)methylethoxy]methylethoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)

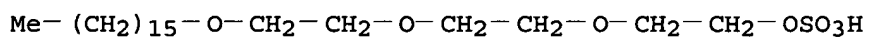


3 ( D1-Me )

● Na

RN 94234-78-3 HCAPLUS

CN Propanol, [2-[2-(hexadecyloxy)methylethoxy]methylethoxy]-, hydrogen sulfate, calcium salt (9CI) (CA INDEX NAME)

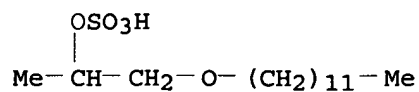


3 ( D1-Me )

● 1/2 Ca

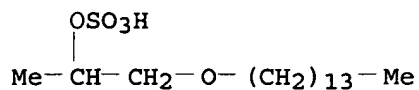
RN 100899-99-8 HCAPLUS

CN 2-Propanol, 1-(dodecyloxy)-, hydrogen sulfate, magnesium salt (9CI) (CA INDEX NAME)



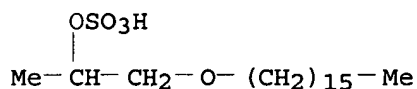
● 1/2 Mg

RN 100900-00-3 HCAPLUS  
CN 2-Propanol, 1-(tetradecyloxy)-, hydrogen sulfate, magnesium salt  
(9CI) (CA INDEX NAME)



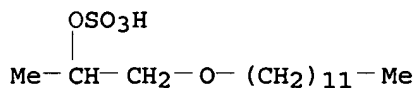
● 1/2 Mg

RN 100900-01-4 HCAPLUS  
CN 2-Propanol, 1-(hexadecyloxy)-, hydrogen sulfate, magnesium salt  
(9CI) (CA INDEX NAME)



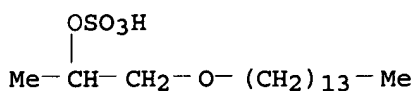
● 1/2 Mg

RN 100900-02-5 HCAPLUS  
CN 2-Propanol, 1-(dodecyloxy)-, hydrogen sulfate, calcium salt (9CI)  
(CA INDEX NAME)



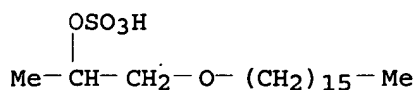
● 1/2 Ca

RN 100900-03-6 HCAPLUS  
CN 2-Propanol, 1-(tetradecyloxy)-, hydrogen sulfate, calcium salt  
(9CI) (CA INDEX NAME)



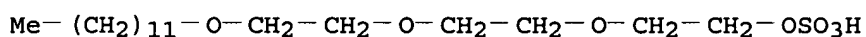
● 1/2 Ca

RN 100900-04-7 HCAPLUS  
CN 2-Propanol, 1-(hexadecyloxy)-, hydrogen sulfate, calcium salt  
(9CI) (CA INDEX NAME)



● 1/2 Ca

RN 116050-08-9 HCAPLUS  
 CN Propanol, [2-[2-(dodecyloxy)methylethoxy]methylethoxy]-, hydrogen sulfate, calcium salt (9CI) (CA INDEX NAME)



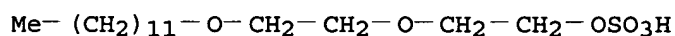
3 ( D1-Me )

● 1/2 Ca

CC 46-3 (Surface Active Agents and Detergents)  
 ST anionic surfactant Krafft point  
 IT Micelles  
     (critical concentration of, of anionic surfactants)  
 IT Krafft point  
     (of anionic surfactants)  
 IT Surfactants  
     (anionic, preparation and Krafft point and critical micelle concentration of)  
 IT 7647-14-5, Sodium chloride, uses  
     (anionic surfactant solubility in aqueous decane containing)  
 IT 151-21-3P, preparation  
     (preparation and Krafft point and critical micelle concentration of)  
 IT 1120-01-0P 1191-50-0P 3097-08-3P 4780-52-3P  
 14858-45-8P 14858-50-5P 14858-54-9P  
 14858-56-1P 15826-16-1P 17006-05-2P  
 17018-84-7P 17211-21-1P 25446-91-7P 41343-91-3P  
 63596-52-1P 72267-13-1P 72267-15-3P  
 74791-05-2P 74812-85-4P 94234-78-3P  
 100899-99-8P 100900-00-3P 100900-01-4P  
 100900-02-5P 100900-03-6P 100900-04-7P  
 116050-08-9P  
     (surfactants, preparation and Krafft point and critical micelle concentration of)  
 IT 25542-86-3  
     (surfactants, solubility of, sodium chloride concentration effect on)

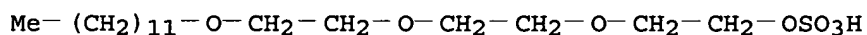
L40 ANSWER 25 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1993:8630 HCAPLUS  
 DOCUMENT NUMBER: 118:8630

TITLE: Syntheses and surface active properties of polyoxyethylene fatty alcohol ether sulfonates  
 AUTHOR(S): Shi, Mingli; Ding, Zhaoyun; Wang, Zhongni  
 CORPORATE SOURCE: Dep. Chem., Shandong Norm. Univ., Jinan, 250014, Peop. Rep. China  
 SOURCE: Gaodeng Xuexiao Huaxue Xuebao (1991), 12(10), 1341-3  
 CODEN: KTHPDM; ISSN: 0251-0790  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Chinese  
 AB Several polyoxyethylene alkyl ether Na sulfonates were prepared and characterized. The krafft point and critical micelle concentration of these compds. were determined. The surfactant properties of triethylene glycol alkyl ether Na sulfonates were better than those of ethylene glycol or diethylene glycol alkyl ether Na sulfonates.  
 IT 3088-31-1P 13150-00-0P 14858-54-9P  
 15826-16-1P 25446-80-4P 43168-25-8P  
 (preparation and surfactant properties of)  
 RN 3088-31-1 HCAPLUS  
 CN Ethanol, 2-[2-(dodecyloxy)ethoxy]-, hydrogen sulfate, sodium salt (7CI, 8CI, 9CI) (CA INDEX NAME)



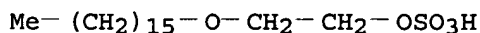
● Na

RN 13150-00-0 HCAPLUS  
 CN Ethanol, 2-[2-[2-(dodecyloxy)ethoxy]ethoxy]-, hydrogen sulfate, sodium salt (7CI, 8CI, 9CI) (CA INDEX NAME)



● Na

RN 14858-54-9 HCAPLUS  
 CN Ethanol, 2-(hexadecyloxy)-, hydrogen sulfate, sodium salt (6CI, 8CI, 9CI) (CA INDEX NAME)



● Na

RN 15826-16-1 HCAPLUS  
 CN Ethanol, 2-(dodecyloxy)-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)

Me- (CH<sub>2</sub>)<sub>11</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

RN 25446-80-4 HCAPLUS  
CN Ethanol, 2-[2-[2-(tetradecyloxy)ethoxy]ethoxy]-, hydrogen sulfate,  
sodium salt (9CI) (CA INDEX NAME)

Me- (CH<sub>2</sub>)<sub>13</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

RN 43168-25-8 HCAPLUS  
CN Ethanol, 2-[2-[2-(hexadecyloxy)ethoxy]ethoxy]-, hydrogen sulfate,  
sodium salt (6CI, 9CI) (CA INDEX NAME)

Me- (CH<sub>2</sub>)<sub>15</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

CC 46-3 (Surface Active Agents and Detergents)  
IT 3088-31-1P 13150-00-0P 14858-54-9P  
15826-16-1P 25446-80-4P 43168-25-8P  
(preparation and surfactant properties of)

L40 ANSWER 26 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1992:176523 HCAPLUS  
DOCUMENT NUMBER: 116:176523  
TITLE: Octadienyl ether sulfates for use in  
surfactants  
INVENTOR(S): Fabry, Bernd; Gruber, Bert  
PATENT ASSIGNEE(S): Henkel K.-G.a.A., Germany  
SOURCE: Ger. Offen., 5 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE         |
|------------|------|----------|-----------------|--------------|
| DE 4020973 | A1   | 19920102 | DE 1990-4020973 | 1990<br>0630 |
| WO 9200274 | A1   | 19920109 | WO 1991-EP1163  | 1991         |



0622

&lt;--

W: JP, US

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE

PRIORITY APPLN. INFO.:

DE 1990-4020973

A

1990

0630

&lt;--

OTHER SOURCE(S): MARPAT 116:176523

AB Sulfates  $R_{10}(CH_2CHR_{20})nSO_3X$  ( $R_1$  = octadienyl;  $R_2$  = H, Me;  $n$  = 1-10;  $X$  = H, alkali metal, etc.), useful as **surfactants** having good **solubility** in cold water and good foaming properties, are **prepared** by sulfating compds.  $R_{10}(CH_2CHR_{20})nH$  (**prepared** by telomerization of butadiene with a glycol or oligoalkylene glycol) followed by neutralization and hydrolysis of the **product**.

IT 140448-62-0P 140448-64-2P 140448-65-3P  
(preparation of surface-active)

RN 140448-62-0 HCAPLUS

CN Ethanol, 2-(octadienyloxy)-, hydrogen sulfate, sodium salt (9CI)  
(CA INDEX NAME)

CM 1

CRN 61894-65-3

CMF C10 H22 O5 S

 $Me-(CH_2)_7-O-CH_2-CH_2-OSO_3H$ 

RN 140448-64-2 HCAPLUS

CN Ethanol, 2-[2-(octadienyloxy)ethoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 140448-63-1

CMF C12 H26 O6 S

 $Me-(CH_2)_7-O-CH_2-CH_2-O-CH_2-CH_2-OSO_3H$ 

RN 140448-65-3 HCAPLUS

CN Ethanol, 2-[2-[2-(octadienyloxy)ethoxy]ethoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 61894-68-6

CMF C14 H30 O7 S

 $Me-(CH_2)_7-O-CH_2-CH_2-O-CH_2-CH_2-O-CH_2-CH_2-OSO_3H$ 

IC ICM C07C305-10

ICS C11D001-29; B01F017-04; A61K007-075

CC 46-3 (Surface Active Agents and **Detergents**)

Section cross-reference(s): 23

ST octadienyl ether sulfate **prepn surfactant**;  
polyoxyalkylene octadienyl ether sulfate **surfactant**;  
polyoxyethylene octadienyl ether sulfate **surfactant**;  
glycol octadienyl ether sulfate **surfactant**; foaming  
**surfactant** octadienyl ether sulfate; **soly**  
**surfactant** octadienyl ether sulfate

IT **Surfactants**  
(octadienyl ether sulfates, **preparation of cold water-**  
**soluble**, foaming)

IT 140448-62-0P 140448-64-2P 140448-65-3P  
140475-26-9P 140486-66-4P  
(**preparation of surface-active**)

IT 7664-93-9DP, Sulfuric acid, esters with glycol and oligoalkylene  
glycol monooctadienyl ethers  
(**preparation of surfact-active**)

L40 ANSWER 27 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1990:442810 HCAPLUS

DOCUMENT NUMBER: 113:42810

TITLE: The synthesis and surface activities of octyl  
polyoxyethylene ether sulfates and pyridinium  
salt

AUTHOR(S): Li, Xuegang; Zhao, Guoxi

CORPORATE SOURCE: Dep. Chem., Beijing Univ., Beijing, Peop. Rep.  
China

SOURCE: Riyong Huaxue Gongye (1989), (5),  
208-11

CODEN: RHGOE8; ISSN: 1001-1803

DOCUMENT TYPE: Journal

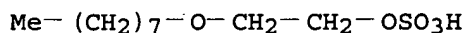
LANGUAGE: Chinese

AB Octyl polyoxyethylene sulfates and pyridinium salts were prepared  
from homogeneous polyoxyethylene octyl ether by Williamson  
synthesis. Their 1:1 mixture had high surface activity and formed a  
clear solution at any concns.

IT 67656-23-9P 118665-06-8P  
(**preparation and surface activity of**)

RN 67656-23-9 HCAPLUS

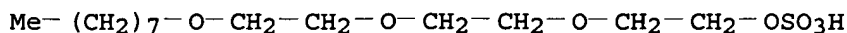
CN Ethanol, 2-(octyloxy)-, hydrogen sulfate, sodium salt (9CI) (CA  
INDEX NAME)



● Na

RN 118665-06-8 HCAPLUS

CN Ethanol, 2-[2-[2-(octyloxy)ethoxy]ethoxy]-, hydrogen sulfate,  
sodium salt (9CI) (CA INDEX NAME)



● Na

CC 46-3 (Surface Active Agents and Detergents)

IT 67656-23-9P 118665-06-8P 128298-17-9P  
(preparation and surface activity of)

L40 ANSWER 28 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1988:531260 HCAPLUS

DOCUMENT NUMBER: 109:131260

TITLE: **Solubilities** of salts and urea in  
the concentrated solutions of mixed ionic  
**surfactants**

AUTHOR(S): Tajima, Kazuo; Horiuchi, Teruo; Tanaka, Minako

CORPORATE SOURCE: Fac. Eng., Kanagawa Univ., Yokohama, Japan

SOURCE: Yukagaku (1988), 37(7), 535-40

CODEN: YKGKAM; ISSN: 0513-398X

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

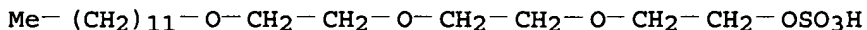
AB A study was made of the **solubilities** of NaSCN, Na<sub>2</sub>CO<sub>3</sub>, Na<sub>2</sub>SO<sub>4</sub>, and urea in mixed solns. of triethylene glycol dodecyl ether sulfate Na salt (I) and Na tetradecenesulfonate (II) at 20% concentration **Solubility** was measured at 25° by a visual **method**. A maximum in the **solubility** vs. mole fraction curve was found at a 2:1 I-II molar ratio for Na<sub>2</sub>CO<sub>3</sub> and 1:1 I-II ratio for NaSCN, but was not observed for Na<sub>2</sub>SO<sub>4</sub> or urea. The maximum **solubilities** of Na<sub>2</sub>CO<sub>3</sub> and NaSCN were .apprx.87% and 30%, resp., of those observed when using pure water as the solvent at 25°. Na<sub>2</sub>CO<sub>3</sub> **solubility** was also observed in mixed **surfactant** solns. of I with other **surfactants**. Thus, maximum **solubility** could be considered to take place when (1) at least poly(oxyethylene) alkyl ether sulfate is present as the **surfactant** in solution, and (2) the hydration of salt dissolved is weaker than that of the ionic polar groups (RSO<sub>3</sub>- or RSO<sub>4</sub>-), but stronger than that of the poly(oxyethylene) groups in the **surfactant**.

IT 13150-00-0, Triethylene glycol dodecyl ether sulfate  
sodium salt

(mixed aqueous solns. with sodium tetradecenesulfonate,  
**solubilities** of salts and urea in)

RN 13150-00-0 HCAPLUS

CN Ethanol, 2-[2-[2-(dodecyloxy)ethoxy]ethoxy]-, hydrogen sulfate,  
sodium salt (7CI, 8CI, 9CI) (CA INDEX NAME)



● Na

CC 46-3 (Surface Active Agents and Detergents)

ST salt **soly** anionic **surfactant**; urea

**soly** anionic mixed **surfactant**

IT **Surfactants**

(anionic, sulfates and sulfonates, **solubility** of salts and  
urea in concentrated aqueous solns. of)

IT 13150-00-0, Triethylene glycol dodecyl ether sulfate  
sodium salt

(mixed aqueous solns. with sodium tetradecenesulfonate,  
**solubilities** of salts and urea in)

IT 29963-33-5, Sodium tetradecenesulfonate  
 (mixed concentrated aqueous solns. with triethylene glycol dodecyl ether  
 sulfate sodium salt, **solubility** of urea and salts in)  
 IT 57-13-6, Urea, properties 497-19-8, Sodium carbonate, properties  
 540-72-7, Sodium thiocyanate 7757-82-6, Sodium sulfate,  
 properties  
 (**solubility** of, in concentrated aqueous mixed anionic  
 surfactant solns.)

L40 ANSWER 29 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1988:516661 HCAPLUS

DOCUMENT NUMBER: 109:116661

TITLE: Anionic surfactants between double metal  
 hydroxide layers

AUTHOR(S): Kopka, H.; Beneke, K.; Lagaly, G.

CORPORATE SOURCE: Inst. Anorg. Chem., Univ. Kiel, Kiel, D-2300,  
 Fed. Rep. Ger.

SOURCE: Journal of Colloid and Interface Science (  
 1988), 123(2), 427-36

CODEN: JCISA5; ISSN: 0021-9797

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Surfactant films between double metal hydroxide layers are prepared  
 by exchanging interlayer anions of layered double metal hydroxides  
 $\{M1-xIIxIII(OH)_2\}x+xX \cdot zH_2O$ .  $\{Zn_2Cr(OH)_6\} \cdot (NO_3^-) \cdot 2H_2O$  is used as  
 an example of this group of layered materials. The nitrate ions  
 are exchanged by alkyl sulfate ions  $C_nH_{2n}SO_4^-$  ( $n = 6, 8, \dots, 18$ )  
 and dodecyl glycol ether sulfate ions  $C_{12}H_{25}(OCH_2CH_2)_mSO_4^-$  ( $m$   
 $= 0, 1, 2, 4$ ). In equilibrium with the surfactant solns., monolayers  
 of surfactant ions are formed between the Zn Cr hydroxide layers.  
 The chain axes are perpendicular to the hydroxide sheets  
 $[V1(90^\circ) \text{ structure}]$ . After being washed and dried, the  
 materials contain surfactant monolayers with the chains tilted  
 about  $56^\circ$  to the hydroxide sheet  $[V1(56^\circ) \text{ structure}]$ . These materials take up long-chain alkanols  
 $C_nH_{2n+1}OH$  ( $n = 6, 8, \dots, 18$ ) into the interlayer regions.  
 Bilayers are formed consisting of surfactant ions and alkanol  
 mols. For most combinations of  $n$  and  $m$ , the distance between  
 the hydroxide sheets is determined by pairs of sulfate ions and alkanol  
 mols. that are perpendicular to the hydroxide sheets and shortened  
 by 1, 2, or 3 kinks. At extreme differences between  $n$  and  $m$  the  
 pairs are tilted ( $56-60^\circ$ ), or other arrangements occur.  
 Small organic mols. (water, some diols, N-Me formamide, DMSO) are  
 intercalated with maintenance of the  $56^\circ$  chain orientation.  
 In particular cases and if the alkyl chains are not too long, some  
 guest mols. associate, forming larger clusters, and causing a  
 considerable change in the monolayer structure.

IT 70664-25-4P 82107-46-8P 86237-35-6P

(monolayers of, formation of, between double zirconium chromium  
 hydroxide layers)

RN 70664-25-4 HCAPLUS

CN Ethanol, 2-(dodecyloxy)-, hydrogen sulfate, ion(1-) (9CI) (CA  
 INDEX NAME)

Me-  $(CH_2)_{11}-O-CH_2-CH_2-O-SO_3^-$

RN 82107-46-8 HCAPLUS

CN Ethanol, 2-[2-(dodecyloxy)ethoxy]-, hydrogen sulfate, ion(1-)

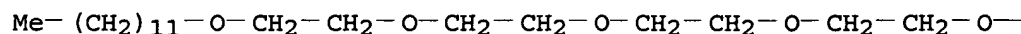
(9CI) (CA INDEX NAME)



RN 86237-35-6 HCAPLUS

CN 3,6,9,12-Tetraoxatetracosan-1-ol, hydrogen sulfate, ion(1-) (9CI)  
(CA INDEX NAME)

PAGE 1-A



PAGE 1-B



CC 66-4 (Surface Chemistry and Colloids)

IT 557-47-1P 70664-25-4P 82107-46-8P

86237-35-6P

(monolayers of, formation of, between double zirconium chromium  
hydroxide layers)

L40 ANSWER 30 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1987:614366 HCAPLUS

DOCUMENT NUMBER: 107:214366

TITLE: Polyacrylamide gel electrophoresis of several  
proteins in the presence of sodium  
oligooxyethylene dodecyl ether sulfates or a  
commercially available analogAUTHOR(S): Koide, Misao; Fukuda, Masahiro; Ohbu, Kazuo;  
Watanabe, Yasushi; Hayashi, Yutaro; Takagi,  
ToshioCORPORATE SOURCE: Appl. Res. Lab. II, Lion Corp., Tokyo, 132,  
JapanSOURCE: Analytical Biochemistry (1987),  
164(1), 150-5

CODEN: ANBCA2; ISSN: 0003-2697

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The behavior of water-soluble proteins and a typical membrane protein in polyacrylamide gel electrophoresis was studied in the presence of Na oligooxyethylene dodecyl ether sulfates with a defined number of oxyethylene units or a com. available analog with distribution and heterogeneity for the oxyethylene chain length and alkyl group, resp. It was concluded that: (1) most water-soluble proteins do not interact with the anionic surfactants as long as their oxyethylene chain lengths are sufficiently long; (2) with com. available surfactant binds exceptionally well to  $\beta$ -lactoglobulin without causing denaturation and subsequent dissociation; (3) such surfactants are expected to solubilize membrane proteins without causing denaturation as judged from the result with  $\text{Na}^+$ ,  $\text{K}^+$ -ATPase and are promising as new solubilizing agents for membrane proteins which enable efficient electrophoretic anal. or

separation after the solubilization.

- IT 3088-31-1P, Sodium dioxyethylene dodecyl ether sulfate  
(preparation of, as detergent for PAGE of proteins)  
RN 3088-31-1 HCAPLUS  
CN Ethanol, 2-[2-(dodecyloxy)ethoxy]-, hydrogen sulfate, sodium salt  
(7CI, 8CI, 9CI) (CA INDEX NAME)



● Na

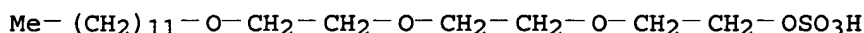
- CC 9-7 (Biochemical Methods)  
Section cross-reference(s): 46  
ST protein sepn PAGE **surfactant**; membrane protein sepn  
**surfactant** PAGE; gel electrophoresis protein  
**surfactant**; oxyethylene alkyl ether sulfate **prepn**  
IT Cell membrane  
(proteins of, separation of, by PAGE, sodium oligooxyethylene  
dodecyl ether sulfates and analogs as **surfactants**  
for)  
IT Albumins, analysis  
Hemoglobins  
Ovalbumins  
Proteins, analysis  
(separation of, by PAGE, sodium oligooxyethylene dodecyl ether  
sulfates and analogs as **surfactants** for)  
IT **Surfactants**  
(anionic, sodium oligooxyethylene dodecyl ether sulfates and  
analog, **preparation** of, for PAGE of proteins)  
IT Electrophoresis and Ionophoresis  
(gel, of proteins, on polyacrylamide, sodium oligooxyethylene  
dodecyl ether sulfates and analogs as **surfactants**  
for)  
IT Lactoglobulins  
( $\beta$ -, separation of, by PAGE, sodium oligooxyethylene dodecyl  
ether sulfates and analogs as **surfactants** for)  
IT 75-21-8DP, reaction **products** with alcs., sulfates,  
sodium salts 151-21-3DP, oxyethylene derivs. 151-21-3P,  
**preparation** 3088-31-1P, Sodium dioxyethylene  
dodecyl ether sulfate 111338-20-6P 111338-21-7P 111338-22-8P  
111338-23-9P 111338-24-0P  
(**preparation** of, as detergent for PAGE of proteins)  
IT 3055-93-4 3055-94-5 3055-96-7 3055-98-9, Octaoxyethylene  
dodecyl ether 4536-30-5 4542-57-8, Dodecyl ether 5274-68-0,  
Tetraoxyethylene dodecyl ether  
(reaction of, with sulfuric oxide reaction **product**  
with dioxane)  
IT 9002-08-8, Trypsinogen 9035-81-8, Trypsin inhibitor  
(separation of, by PAGE, sodium oligooxyethylene dodecyl ether  
sulfates and analogs as **surfactants** for)  
IT 9000-83-3, ATPase  
(sodium-potassium-dependent, separation of, by PAGE, sodium  
oligooxyethylene dodecyl ether sulfates and analogs as  
**surfactants** for)

L40 ANSWER 31 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1987:604466 HCAPLUS  
 DOCUMENT NUMBER: 107:204466  
 TITLE: Identification of hydrophobic metabolites  
 formed during biodegradation of alkyl  
 ethoxylate and alkyl ethoxy sulfate  
 surfactants by Pseudomonas sp. DES1  
 AUTHOR(S): Griffiths, E. Thomas; Hales, Stephen G.;  
 Russell, Nicholas J.; White, Graham F.  
 CORPORATE SOURCE: Dep. Biochem., Univ. Coll., Cardiff, CF1 1XL,  
 UK  
 SOURCE: Biotechnology and Applied Biochemistry ( 1987), 9(3), 217-29  
 CODEN: BABIEC; ISSN: 0885-4513  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Mineralization of Na [1-14C]dodecyl triethoxysulfate (I) and its unsulfated counterpart triethylene glycol [1-14C]dodecyl ether (II) by a sewage isolate Pseudomonas DES1 were similar in terms of (1) conversion of radiolabel to 14CO2 (.apprx.75%) and (2) final distribution of radioactivity between water-soluble (.apprx.20%) and ether extractable (.apprx.5%) residues. Thin-layer chromatog. of ether exts. showed that primary degradation of I was complete in 2 h, with simultaneous production of large amts. of triethylene glycol dodecyl ether, triethylene glycol dodecyl ether (III). Extended incubation of I or II with lysates produced  $\leq 20$  radiolabeled, ether-extractable metabolites of which 8 predominated; however, no compound accumulated and the metabolites never accounted for >20% of the total label throughout incubations. By a combination of chemical modification, thin-layer chromatog., and cochromatog. with authentic radiolabeled stds., the main metabolites were identified as the oxidation product of III (3,6,9-trioxaheneicosanoic acid); diethylene glycol dodecyl ether and the corresponding acid 3,6-dioxaoctadecanoic acid; monoethylene glycol dodecyl ether and the corresponding acid 3-oxapentadecanoic acid; dodecanol and dodecanoic acid; and a group of metabolites not identified individually but shown to contain alkyl-glycol ether bonds and carbonyl groups, but no hydroxyl groups. Precursor-product relationships among the various metabolites were absent but the presence of compds. containing alkyl chains and <3 glycol units confirmed the operation of an ether-cleavage system in the Pseudomonas. Detection of alc., aldehyde, and carboxyl groups also implied the presence of alc. and aldehyde dehydrogenase enzymes to facilitate interconversion.

IT 13150-00-0  
 (biodegrdn. of, by Pseudomonas, hydrophobic metabolites from)  
 RN 13150-00-0 HCAPLUS  
 CN Ethanol, 2-[2-[2-(dodecyloxy)ethoxy]ethoxy]-, hydrogen sulfate, sodium salt (7CI, 8CI, 9CI) (CA INDEX NAME)



● Na

CC 60-1 (Waste Treatment and Disposal)  
 Section cross-reference(s): 10, 46

ST alkyl ethoxylate hydrophobic metabolite wastewater; ethoxy alkyl sulfate metabolite wastewater; **Pseudomonas surfactant** biodegrdn metabolite wastewater

IT **Surfactants**  
(biodegrdn. of, by Pseudomonas, hydrophobic metabolites from)

IT **13150-00-0**  
(biodegrdn. of, by Pseudomonas, hydrophobic metabolites from)

IT 112-53-8P, Dodecanol 143-07-7P, Dodecanoic acid, **preparation** 3055-93-4P, Diethylene glycol dodecyl ether 3055-94-5P, Triethylene glycoldodecyl ether 4536-30-5P 6064-75-1P 20858-23-5P 20858-24-6P  
(formation of, in sodium dodecyl triethoxy sulfate degradation by Pseudomonas)

L40 ANSWER 32 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1987:579645 HCAPLUS

DOCUMENT NUMBER: 107:179645

TITLE: Minimizing cosolvent requirements for microemulsion formed with binary surfactant mixtures

AUTHOR(S): Lallanne-Cassou, C.; Carmona, I.; Fortney, L.; Samii, A.; Schechter, R. S.; Wade, W. H.; Weerasooriya, U.; Weerasooriya, V.; Yiv, S.

CORPORATE SOURCE: Univ. Texas, Austin, TX, 78712, USA

SOURCE: Journal of Dispersion Science and Technology (1987), 8(2), 137-56  
CODEN: JDTEDS; ISSN: 0193-2691

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In enhanced petroleum recovery with microemulsions, alc. (cosolvent) requirements are lowered when a surfactant with a branched and short hydrophobic tail and a higher EtO content is used. An alternate procedure for producing alc.-free microemulsions can be obtained by varying the mole ratio of straight and mid-chain branched species.

IT **111051-90-2DP**, sulfonate derivs., Na salts  
(surfactants, microemulsions containing, for petroleum recovery, cosolvent economizing in)

RN 111051-90-2 HCAPLUS

CN Ethanol, 2-(eicosyloxy)-; hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)

Me- (CH<sub>2</sub>)<sub>19</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

CC 51-2 (Fossil Fuels, Derivatives, and Related Products)

IT 98-11-3DP, Benzenesulfonic acid, alkyl derivs. 9004-98-2DP, Polyethylene glycol oleyl ether, sulfonate derivs.

**111051-90-2DP**, sulfonate derivs., Na salts

(surfactants, microemulsions containing, for petroleum recovery, cosolvent economizing in)

L40 ANSWER 33 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1986:226756 HCAPLUS

DOCUMENT NUMBER: 104:226756



TITLE: Liquid cleansing compositions  
 INVENTOR(S): Maile, Robert Joseph, Jr.  
 PATENT ASSIGNEE(S): Procter and Gamble Co., USA  
 SOURCE: Eur. Pat. Appl., 26 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.                                | KIND | DATE     | APPLICATION NO. | DATE               |
|-------------------------------------------|------|----------|-----------------|--------------------|
| EP 166608                                 | A2   | 19860102 | EP 1985-304540  | 1985<br>0626       |
| EP 166608                                 | A3   | 19890705 |                 |                    |
| R: AT, BE, CH, DE, FR, IT, LI, LU, NL, SE |      |          |                 |                    |
| GB 2160888                                | A1   | 19860102 | GB 1985-16174   | 1985<br>0626       |
| GB 2160888                                | B2   | 19871223 |                 |                    |
| AU 8544237                                | A1   | 19860102 | AU 1985-44237   | 1985<br>0627       |
| AU 583830                                 | B2   | 19890511 |                 |                    |
| CA 1242950                                | A1   | 19881011 | CA 1985-485463  | 1985<br>0627       |
| JP 61081496                               | A2   | 19860425 | JP 1985-142403  | 1985<br>0628       |
| US 4917823                                | A    | 19900417 | US 1988-277463  | 1988<br>1123       |
| PRIORITY APPLN. INFO.:                    |      |          | US 1984-625407  | A<br>1984<br>0628  |
|                                           |      |          | US 1986-921905  | B1<br>1986<br>1024 |

AB A liquid cleansing composition comprises a water-soluble cellulose polymer 0.1-01.5, a glycol solvent 0.5-20, a synthetic surfactant 10-50, an electrolyte 0.001-1.0, and water 50-80%, having a neat viscosity 2000-12,000 cP and a dilute viscosity (50%) of 15-95 cP. Thus 28.5% sodium lauryl ethoxylate sulfate 39.3, 28.5% Na lauryl sulfate 32.2, coconut monoethanolamide 4.0, perfume 3, ethylene glycol distearate, EDTA 0.1, preservatives 0.25, color solution 0.8, citric acid 0.25, NaCl 0.1, Jaguar HP-60 0.55, propylene glycol 9%, and the balance distilled water were mixed and evaluated as a liquid cleansing composition. The product, unlike others containing cellulose polymers,

was phase-stable.

IT 15826-16-1  
 (liquid cleaning compns. containing, with low electrolyte level)  
 RN 15826-16-1 HCAPLUS  
 CN Ethanol, 2-(dodecyloxy)-, hydrogen sulfate, sodium salt (9CI) (CA  
 INDEX NAME)

Me- (CH<sub>2</sub>)<sub>11</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

IC ICM C11D003-37  
 CC 46-6 (Surface Active Agents and Detergents)  
 IT Detergents  
 (cleaning compns., liquid, containing water-soluble cellulose  
 derivative and glycol solvent, with low electrolyte level)  
 IT 57-55-6, uses and miscellaneous 107-21-1, uses and miscellaneous  
 137-16-6 151-21-3, uses and miscellaneous 627-83-8 9004-32-4  
 9004-62-0 9004-64-2 9041-56-9 14807-96-6, uses and  
 miscellaneous 15826-16-1 25322-68-3 25322-69-4  
 37353-59-6  
 (liquid cleaning compns. containing, with low electrolyte level)

L40 ANSWER 34 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1984:532891 HCAPLUS

DOCUMENT NUMBER: 101:132891

TITLE: Cosmetic agent from quaternary chitosan  
 derivatives and new quaternary chitosan  
 derivatives

INVENTOR(S): Lang, Guenther; Wendel, Harald; Konrad, Eugen

PATENT ASSIGNEE(S): Wella A.-G., Fed. Rep. Ger.

SOURCE: Ger. Offen., 40 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.        | KIND | DATE     | APPLICATION NO. | DATE         |
|-------------------|------|----------|-----------------|--------------|
| -----             | ---- | -----    | -----           | -----        |
| DE 3245784        | A1   | 19840614 | DE 1982-3245784 | 1982<br>1210 |
| WO 8402343        | A1   | 19840621 | WO 1983-EP287   | 1983<br>1103 |
| W: AU, BR, JP, US |      |          |                 |              |
| AU 8322675        | A1   | 19840705 | AU 1983-22675   | 1983<br>1103 |
| AU 561477         | B2   | 19870507 |                 |              |
| EP 115574         | A1   | 19840815 | EP 1983-110950  |              |

1983  
1103

&lt;--

EP 115574 B1 19870128  
R: AT, DE, FR, GB, IT, NL, SE  
BR 8307642 A 19841127

BR 1983-7642

1983  
1103

&lt;--

JP 60500059 T2 19850117

JP 1983-503779

1983  
1103

&lt;--

JP 06027121 B4 19940413  
AT 25261 E 19870215

AT 1983-110950

1983  
1103

&lt;--

US 4822598 A 19890418

US 1984-634100

1984  
0720

&lt;--

US 4921949 A 19900501

US 1989-298514

1989  
0308

&lt;--

PRIORITY APPLN. INFO.:

DE 1982-3245784

A

1982  
1210

&lt;--

EP 1983-110950

A

1983  
1103

&lt;--

WO 1983-EP287

A

1983  
1103

&lt;--

US 1984-634100

A3

1984  
0720

&lt;--

AB Etherification of chitosan (I) with glycidyltrimethylammonium chloride (II) as well as glycidol (III) gave the corresponding quaternized I for use as a hair conditioner. Thus, a mixture of I 100, II 80.6, and III 79.5 g in 1 l. H<sub>2</sub>O was stirred for 48 h at 30°, treated with 25.8 g II and 26.3 g III and stirred for 24 h at 40° to give 115 g 2,3-dihydroxypropyl 2-hydroxy-3-(trimethylammonio)propyl chitosan chloride (IV) [92091-36-6] with limiting viscosity number 65 mL/g, titratable N 3.07 mmol/g, Cl- 2.35%, substitution degree 0.22 and 1.7 for cationic and dihydroxypropyl groups, resp., H<sub>2</sub>O vapor absorption 11.1%, and Koenig pendulum hardness 201 s. A mixture containing IV 0.6, H<sub>2</sub>O 73.8, iso-PrOH 25.0, 10% HCO<sub>2</sub>H 0.4, and perfume oil 0.2 g showed good hair fixing effect.

IT 3088-31-1P

(hair preps. containing quaternized chitosan derivative, additives and, manufacture of)

RN 3088-31-1 HCAPLUS

CN Ethanol, 2-[2-(dodecyloxy)ethoxy]-, hydrogen sulfate, sodium salt

(7CI, 8CI, 9CI) (CA INDEX NAME)

Me- (CH<sub>2</sub>)<sub>11</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

IC C08B037-08; A61K007-00; C11D003-37; A61K007-48; A61K007-02;  
 A61K007-40; A61K007-08; A61K007-11; A61K007-13  
 CC 44-7 (Industrial Carbohydrates)  
 Section cross-reference(s): 62  
 IT 50-21-5P, uses and miscellaneous 68-11-1P, uses and  
 miscellaneous 104-74-5P 106-50-3P, uses and miscellaneous  
 108-46-3P, uses and miscellaneous 112-02-7P 112-92-5P  
 120-47-8P 1066-33-7P 3088-31-1P 6179-44-8P  
 9004-65-3P 9005-66-7P 36653-82-4P 56216-28-5P  
 (hair preps. containing quaternized chitosan derivative, additives  
 and, manufacture of)

L40 ANSWER 35 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1982:201624 HCAPLUS  
 DOCUMENT NUMBER: 96:201624  
 TITLE: Complex compounds of bromine with surfactants  
 INVENTOR(S): Klopotek, Alojzy  
 PATENT ASSIGNEE(S): Instytut Chemii Przemyslowej, Pol.  
 SOURCE: Pol., 13 pp.  
 CODEN: POXXA7  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Polish  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE         |
|------------|------|----------|-----------------|--------------|
| -----      | ---- | -----    | -----           |              |
| PL 110778  | B2   | 19800731 | PL 1977-201277  | 1977<br>1004 |

PRIORITY APPLN. INFO.:

<--  
 PL 1977-201277 A  
 1977  
 1004

AB Complexes of Br with OH-containing surfactants having good washing and disinfectant properties, are prepared by treating OH-containing surfactants at ≤323K with Br<sub>3</sub>- obtained in the reaction of liquid Br with saturated aqueous solution of KBr or NaBr. The OH-containing surfactants used are oxyethylated or oxypropylated fatty alcs., oxyethylated or oxypropylated N-hydroxyethylamides of fatty acids, phosphates of oxyethylated or oxypropylated fatty alcs., monoethanolamine salts of the phosphates, sulfates of oxyethylated or oxypropylated fatty alcs., oxyethylated or oxypropylated quaternary ammonium chlorides or bromides, and ethylene oxide-propylene oxide copolymers. Thus, 9.63 kg KBr in 26.76 kg water was treated at ≤323K with 6.47 kg liquid Br giving a solution of KBr<sub>3</sub> which was gradually added to a reactor containing 57.14 kg polyethylene glycol mono-n-dodecyl ether. The resulting

exothermic reaction (the temperature was maintained at 303-13K by cooling) gave a complex of structure  $\text{Me}(\text{CH}_2)_{11}(\text{OCH}_2\text{CH}_2)_n\text{NOH} \cdot \text{BrBr} \cdot \text{HO}(\text{CH}_2\text{CH}_2\text{O})_n(\text{CH}_2)_{11}\text{Me}$  demonstrated by chemical and NMR spectral data. The complex decomposed at >318K, and was deactivated and discolored by  $\text{HCO}_2\text{H}$  and  $\text{Na}_2\text{S}_2\text{O}_3$ .

IT 40777-24-0DP, bromine complexes  
(detergent and disinfectant, preparation, properties and structure of)  
RN 40777-24-0 HCAPLUS  
CN 3,6,9,12-Tetraoxatetracosan-1-ol, hydrogen sulfate (9CI) (CA INDEX NAME)

$\text{Me}-(\text{CH}_2)_{11}-\text{O}-\text{CH}_2-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}_2-\text{OSO}_3\text{H}$

IC C07C031-18  
CC 46-3 (Surface Active Agents and Detergents)  
Section cross-reference(s): 63  
IT 111-76-2DP, bromine complexes 141-43-5DP, complexes with bromine and polyethylene glycol mono dodecyl ether phosphate  
3055-94-5DP, bromine complexes 9003-11-6DP, bromine complexes  
9004-99-3DP, bromine complexes 9038-43-1DP, bromine complexes  
25852-45-3DP, bromine complexes 40777-24-0DP, bromine complexes  
41572-20-7DP, bromine complexes 52598-24-0DP, bromine complexes  
81772-08-9DP, bromine complexes  
(detergent and disinfectant, preparation, properties and structure of)

L40 ANSWER 36 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1980:570035 HCAPLUS

DOCUMENT NUMBER: 93:170035

TITLE: Studies on the optimum solubilization conditions for surfactant-cosurfactant mixtures

AUTHOR(S): Hanrin, Munehiro; Shinoda, Kozo; Hirai, Tsuyoshi

CORPORATE SOURCE: Fac. Eng., Yokohama Natl. Univ., Yokohama, 156, Japan

SOURCE: Yukagaku (1980), 29(8), 580-6  
CODEN: YKGKAM; ISSN: 0513-398X

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB The solubilization of hydrocarbons in aqueous solns. of surfactant-cosurfactant mixts. is examined to determination the influence of counter ions on the solubilization and the effects of changing the oxyethylene chain length in the ionic surfactants, i.e., Ca, Mg, or Na salts of  $\text{C}_{12}\text{H}_{25}\text{O}(\text{CH}_2\text{CH}_2\text{O})_n\text{SO}_3\text{H}$  (I) ( $n = 0, 1, \text{ or } 2$ ), and in the cosurfactants, i.e.,  $\text{C}_8\text{H}_{17}\text{O}(\text{CH}_2\text{CH}_2\text{O})_n\text{H}$  (II) ( $n = 1, 2, \text{ or } 3$ ). In the preparation of an emulsion of cyclohexane, the solubilizing power of a mixture of the Ca or Mg salt of I ( $n = 1 \text{ or } 2$ ) and II ( $n = 1-3$ ) is 6-8 times greater than that of the mixts. of the Na salt of I ( $n = 1 \text{ or } 2$ ) and II ( $n = 1-3$ ). The addition of 2% NaCl to aqueous solns. of I ( $n = 1$ ) Na salt [15826-16-1] and II ( $n = 2$ ) [19327-37-8] increases the solubilizing power by a factor of 6. In systems containing I without II, the oxyethylene chain in the I increases their solubilizing power but may decrease the solubilizing power of I-II mixts. and change the optimum

mixing ratio. The optimum mixing ratio of the solubilizers varies with the value of n in the II. The concentration of the I-II mixts. in the aqueous solns. also affects their solubilizing power. The I-II mixts. are especially useful for solubilizing long-chain alkanes, e.g., the use of II (n = 2) with I (n = 1) Ca salt [41343-91-3] increases the solubilization of dodecane by a factor of .apprx.20.

IT 3088-31-1 15826-16-1 41343-91-3

60484-04-0 63596-52-1

(emulsification of hydrocarbons by mixts. of nonionic surfactants and)

RN 3088-31-1 HCAPLUS

CN Ethanol, 2-[2-(dodecyloxy)ethoxy]-, hydrogen sulfate, sodium salt (7CI, 8CI, 9CI) (CA INDEX NAME)

Me- (CH<sub>2</sub>)<sub>11</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

RN 15826-16-1 HCAPLUS

CN Ethanol, 2-(dodecyloxy)-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)

Me- (CH<sub>2</sub>)<sub>11</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

RN 41343-91-3 HCAPLUS

CN Ethanol, 2-(dodecyloxy)-, hydrogen sulfate, calcium salt (9CI) (CA INDEX NAME)

Me- (CH<sub>2</sub>)<sub>11</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● 1/2 Ca

RN 60484-04-0 HCAPLUS

CN Ethanol, 2-[2-(dodecyloxy)ethoxy]-, hydrogen sulfate, magnesium salt (9CI) (CA INDEX NAME)

Me- (CH<sub>2</sub>)<sub>11</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● 1/2 Mg

RN 63596-52-1 HCAPLUS

CN Ethanol, 2-(dodecyloxy)-, hydrogen sulfate, magnesium salt (9CI)  
(CA INDEX NAME)

Me- (CH<sub>2</sub>)<sub>11</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● 1/2 Mg

CC 46-1 (Surface Active Agents and Detergents)  
ST **solubilization** hydrocarbon anionic nonionic  
**surfactant**; sulfate ethoxylate **solubilization**  
hydrocarbon; polyoxyethylene deriv **solubilization**  
hydrocarbon; emulsification anionic nonionic **surfactant**  
mixt  
IT Optimization  
(of emulsification of hydrocarbons by mixts. of anionic and  
nonionic **surfactants**)  
IT 10020-43-6 19327-37-8 19327-38-9  
(emulsification of hydrocarbons by mixts. of anionic  
**surfactants** and)  
IT 151-21-3, uses and miscellaneous 3088-31-1  
15826-16-1 41343-91-3 60484-04-0  
63596-52-1  
(emulsification of hydrocarbons by mixts. of nonionic  
**surfactants** and)

L40 ANSWER 37 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1980:516322 HCAPLUS

DOCUMENT NUMBER: 93:116322

TITLE: **Synthesis** and surface activity of  
sodium polyoxypropylated higher alcohol  
sulfates

AUTHOR(S): Chlebicki, Jan; Slipko, Kazimiera

CORPORATE SOURCE: Inst. Org. Polym. Technol., Tech. Univ.  
Wroclaw, Wroclaw, 50-370, Pol.

SOURCE: Tenside Detergents (1980), 17(3),  
130-4

CODEN: TSDTAZ; ISSN: 0040-3490

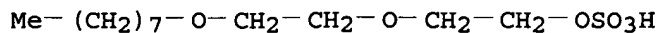
DOCUMENT TYPE: Journal

LANGUAGE: English

AB Propoxylated C8-18 alcs. (d.p. 1-6) were distilled to >99% purity and  
treated with ClSO<sub>3</sub>H to give water-soluble sulfates. The  
surface tensions of the sulfates increase, and the critical micelle  
concns. decrease, with increasing alc. chain length. Those  
**prepared** for C12 and C14 alcs. have the best foaming power.  
The calculated CH<sub>2</sub> unit equivalent is .apprx.1.40 oxypropylene units in  
the sulfates.

IT 74790-94-6 74790-95-7 74790-96-8  
74790-97-9 74790-98-0 74790-99-1  
74791-00-7 74791-01-8 74791-02-9  
74791-03-0 74791-04-1 74791-05-2  
74791-06-3 74791-07-4 74791-08-5  
74791-09-6 74791-10-9 74797-45-8  
74797-46-9 74812-83-2 74812-84-3  
74812-85-4 74812-86-5 74812-87-6  
74812-88-7 74812-89-8  
(surface activity of)

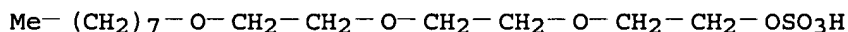
RN 74790-94-6 HCAPLUS  
CN Propanol, [methyl-2-(octyloxy)ethoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



2 ( D1-Me )

● Na

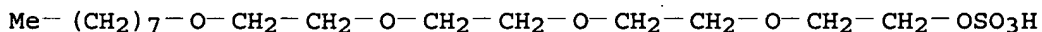
RN 74790-95-7 HCAPLUS  
CN Propanol, [methyl-2-[methyl-2-(octyloxy)ethoxy]ethoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



3 ( D1-Me )

● Na

RN 74790-96-8 HCAPLUS  
CN 3,6,9,12-Tetraoxaeicosan-1-ol, tetramethyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



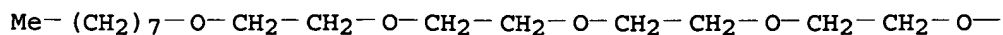
4 ( D1-Me )

● Na

RN 74790-97-9 HCAPLUS  
CN 3,6,9,12,15,18-Hexaoxahexacosan-1-ol, hexamethyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



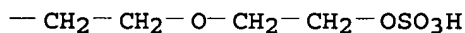
PAGE 1-A



6 ( D1-Me )

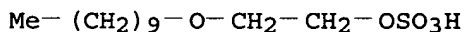
● Na

PAGE 1-B



RN 74790-98-0 HCAPLUS

CN Propanol, (decyloxy)-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)

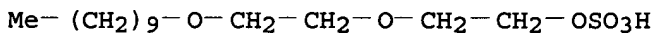


D1-Me

● Na

RN 74790-99-1 HCAPLUS

CN Propanol, [2-(decyloxy)methylethoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)

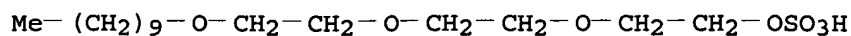


2 ( D1-Me )

● Na

RN 74791-00-7 HCAPLUS

CN Propanol, [2-[2-(decyloxy)methylethoxy]methylethoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



3 ( D1-Me )

● Na

RN 74791-01-8 HCAPLUS  
 CN 3,6,9,12-Tetraoxadocosan-1-ol, tetramethyl-, hydrogen sulfate,  
 sodium salt (9CI) (CA INDEX NAME)

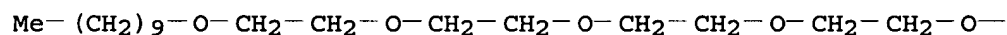


4 ( D1-Me )

● Na

RN 74791-02-9 HCAPLUS  
 CN 3,6,9,12,15-Pentaoxapentacosan-1-ol, pentamethyl-, hydrogen  
 sulfate, sodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



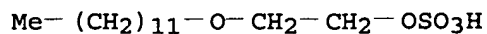
5 ( D1-Me )

● Na

PAGE 1-B



RN 74791-03-0 HCAPLUS  
 CN Propanol, (dodecyloxy)-, hydrogen sulfate, sodium salt (9CI) (CA  
 INDEX NAME)

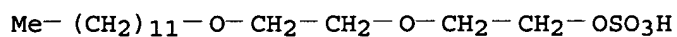


D1-Me

● Na

RN 74791-04-1 HCAPLUS

CN Propanol, [2-(dodecyloxy)methylethoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)

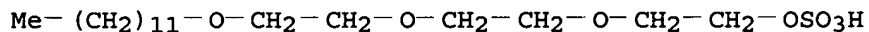


2 ( D1-Me )

● Na

RN 74791-05-2 HCAPLUS

CN Propanol, [2-[2-(dodecyloxy)methylethoxy]methylethoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)

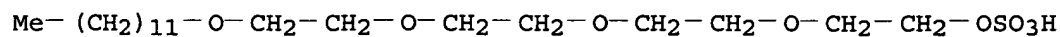


3 ( D1-Me )

● Na

RN 74791-06-3 HCAPLUS

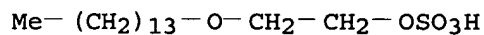
CN 3,6,9,12-Tetraoxatetracosan-1-ol, tetramethyl-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



4 ( D1-Me )

● Na

RN 74791-07-4 HCAPLUS  
CN Propanol, (tetradecyloxy)-, hydrogen sulfate, sodium salt (9CI)  
(CA INDEX NAME)



D1-Me

● Na

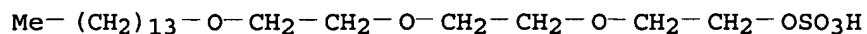
RN 74791-08-5 HCAPLUS  
CN Propanol, [methyl-2-(tetradecyloxy)ethoxy]-, hydrogen sulfate,  
sodium salt (9CI) (CA INDEX NAME)



2 ( D1-Me )

● Na

RN 74791-09-6 HCAPLUS  
CN Propanol, [methyl-2-[methyl-2-(tetradecyloxy)ethoxy]ethoxy]-,  
hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



3 ( D1-Me )

● Na

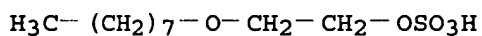
RN 74791-10-9 HCAPLUS  
CN 3,6,9,12-Tetraoxahexacosan-1-ol, tetramethyl-, hydrogen sulfate,  
sodium salt (9CI) (CA INDEX NAME)



4 ( D1-Me )

● Na

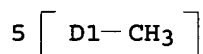
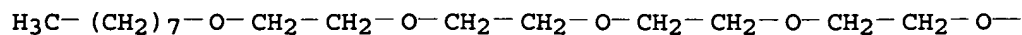
RN 74797-45-8 HCAPLUS  
CN Propanol, (octyloxy)-, hydrogen sulfate, sodium salt (9CI) (CA  
INDEX NAME)

D1-CH<sub>3</sub>

● Na

RN 74797-46-9 HCAPLUS  
CN 3,6,9,12,15-Pentaoxahexacosan-1-ol, pentamethyl-, hydrogen  
sulfate, sodium salt (9CI) (CA INDEX NAME)

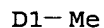
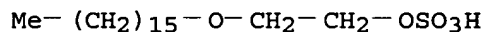
PAGE 1-A



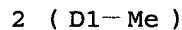
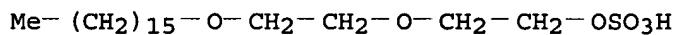
PAGE 1-B



RN 74812-83-2 HCAPLUS

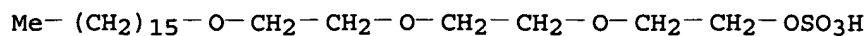
CN Propanol, (hexadecyloxy)-, hydrogen sulfate, sodium salt (9CI)  
(CA INDEX NAME)

RN 74812-84-3 HCAPLUS

CN Propanol, [2-(hexadecyloxy)methylethoxy]-, hydrogen sulfate,  
sodium salt (9CI) (CA INDEX NAME)

RN 74812-85-4 HCAPLUS

CN Propanol, [2-[2-(hexadecyloxy)methylethoxy]methylethoxy]-,  
hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



3 ( D1-Me )

● Na

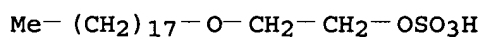
RN 74812-86-5 HCAPLUS  
CN 3,6,9,12-Tetraoxaooctacosan-1-ol, tetramethyl-, hydrogen sulfate,  
sodium salt (9CI) (CA INDEX NAME)



4 ( D1-Me )

● Na

RN 74812-87-6 HCAPLUS  
CN Propanol, (octadecyloxy)-, hydrogen sulfate, sodium salt (9CI)  
(CA INDEX NAME)



D1-Me

● Na

RN 74812-88-7 HCAPLUS  
CN Propanol, [methyl-2-(octadecyloxy)ethoxy]-, hydrogen sulfate,  
sodium salt (9CI) (CA INDEX NAME)

Me- (CH<sub>2</sub>)<sub>17</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

2 ( D1-Me )

● Na

RN 74812-89-8 HCAPLUS

CN Propanol, [methyl-2-[methyl-2-(octadecyloxy)ethoxy]ethoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)

Me- (CH<sub>2</sub>)<sub>17</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

3 ( D1-Me )

● Na

CC 46-3 (Surface Active Agents and Detergents)

ST propoxylate sulfate **surfactant**; micellization  
propoxylate sulfate; alc propoxylated sulfate **surfactant**  
; polypropylene glycol ether sulfate

IT **Surfactants**

(anionic, sulfates of propoxylated fatty alcs., prepn  
. and properties of)

IT 74790-81-1P

(preparation and sulfation of)

IT 29387-89-1P 52871-05-3P 58231-93-9P 63103-90-2P

74790-72-0P 74790-73-1P 74790-74-2P 74790-75-3P

74790-76-4P 74790-77-5P 74790-78-6P 74790-79-7P

74790-80-0P 74790-82-2P 74790-83-3P 74790-84-4P

74790-85-5P 74790-86-6P 74790-87-7P 74790-88-8P

74790-89-9P 74790-90-2P 74790-92-4P 74790-93-5P

74797-44-7P

(preparation of)

IT 74790-94-6 74790-95-7 74790-96-8

74790-97-9 74790-98-0 74790-99-1

74791-00-7 74791-01-8 74791-02-9

74791-03-0 74791-04-1 74791-05-2

74791-06-3 74791-07-4 74791-08-5

74791-09-6 74791-10-9 74797-45-8

74797-46-9 74812-83-2 74812-84-3

74812-85-4 74812-86-5 74812-87-6

74812-88-7 74812-89-8

(surface activity of)

L40 ANSWER 38 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1979:206276 HCAPLUS



DOCUMENT NUMBER: 90:206276  
 TITLE: Aqueous cleaning agent solutions  
 INVENTOR(S): Beck, Rudolf; Gasber, Willi  
 PATENT ASSIGNEE(S): Chemische Werke Huels A.-G., Fed. Rep. Ger.  
 SOURCE: Ger. Offen., 19 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

| PATENT NO.<br>-----    | KIND<br>----                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | DATE<br>----- | APPLICATION NO.<br>----- | DATE              |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------------|-------------------|
| DE 2743607             | A1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 19790405      | DE 1977-2743607          | 1977<br>0928      |
| DE 2743607             | C2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 19880714      | <--                      |                   |
| FR 2404671             | A1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 19790427      | FR 1978-26092            | 1978<br>0912      |
| FR 2404671             | B1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 19830923      | <--                      |                   |
| CH 637690              | A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 19830815      | CH 1978-9984             | 1978<br>0925      |
| SE 7810097             | A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 19790329      | SE 1978-10097            | 1978<br>0926      |
| BE 870802              | A1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 19790327      | BE 1978-190742           | 1978<br>0927      |
| DK 7804281             | A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 19790329      | DK 1978-4281             | 1978<br>0927      |
| NL 7809778             | A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 19790330      | NL 1978-9778             | 1978<br>0927      |
| GB 2006255             | A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 19790502      | GB 1978-38280            | 1978<br>0927      |
| GB 2006255             | B2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 19820303      | <--                      |                   |
| PRIORITY APPLN. INFO.: |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |               | DE 1977-2743607          | A<br>1977<br>0928 |
| AB                     | The Na and K salts of ROCH <sub>2</sub> CH <sub>2</sub> OSO <sub>3</sub> H (I) with R = C <sub>3</sub> -7 alkyl are used as <b>solubilizers</b> and wetting agents in the manufacture of stable aqueous cleaning compns. containing high concns. of electrolytes (e.g., NaOH or K <sub>4</sub> P <sub>2</sub> O <sub>7</sub> ) and <b>surfactants</b> . Thus, a stable cleaning composition was <b>prepared</b> from alkylbenzenesulfonate 1, I (R = Bu) 7.5, NaOH 20, and water 71.5%. |               |                          |                   |
| IT                     | 927-96-8D, alkali salts 70396-82-6D, alkali                                                                                                                                                                                                                                                                                                                                                                                                                                             |               |                          |                   |

salts

(solubilizers, for aqueous cleaning compns.)

RN 927-96-8 HCAPLUS

CN Ethanol, 2-butoxy-, hydrogen sulfate (7CI, 8CI, 9CI) (CA INDEX NAME)

 $\text{n-BuO}-\text{CH}_2-\text{CH}_2-\text{OSO}_3\text{H}$ 

RN 70396-82-6 HCAPLUS

CN Ethanol, 2-(hexyloxy)-, hydrogen sulfate (9CI) (CA INDEX NAME)

 $\text{Me}-(\text{CH}_2)_5-\text{O}-\text{CH}_2-\text{CH}_2-\text{OSO}_3\text{H}$ 

IC C11D001-14

CC 46-6 (Surface Active Agents and Detergents)

ST sulfate alkyl glycol solubilizer; cleaner liq  
solubilizer

IT Detergents

(cleaning compns., aqueous, solubilizers for)

IT Solubilizers

(hydrotropes, alkyl glycol sulfates, for aqueous cleaning compns.)

IT 927-96-8D, alkali salts 70396-82-6D, alkali  
salts

(solubilizers, for aqueous cleaning compns.)

L40 ANSWER 39 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1979:56740 HCAPLUS

DOCUMENT NUMBER: 90:56740

TITLE: Chloriodide complex compounds with  
surfactantsINVENTOR(S): Uminski, Jerzy; Klopotek, Alojzy; Dziala,  
Gabriela; Jakubowska, Wieslawa

PATENT ASSIGNEE(S): Instytut Chemii Przemyslowej, Pol.

SOURCE: Pol., 6 pp.  
CODEN: POXXA7

DOCUMENT TYPE: Patent

LANGUAGE: Polish

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|------|
| -----      | ---- | -----    | -----           |      |
| PL 88777   | P    | 19760930 | PL 1974-171018  |      |

1974  
0513

PRIORITY APPLN. INFO.:

<--  
PL 1974-171018

A

1974  
0513

AB Chloriodination of nonionic [e.g.  $\alpha$ -hydro- $\omega$ -octyloxy-tris(oxyethylene) (I) [19327-38-9]] or ionic [e.g.  $\alpha$ -hydro-tris(oxyethylene) lauryl sulfate (II) [14960-11-3]] detergents with  $\text{NaICl}_2$  or  $\text{ICl}$  is claimed to give products not only with good detergency, but also

with bactericidal properties. E.g., a solution containing 0.1 kg NaICl<sub>2</sub> in 0.3 L water was reacted with 0.75 kg I at <75°. The product was completely soluble. The solution was treated with 0.2 kg H<sub>3</sub>PO<sub>4</sub> and 0.01 kg dodecylbenzenesulfonic acid [27176-87-0] to give liquid detergent concentrate for washing food industry equipment. Similarly II, oxyethylated nonylphenol, and α-hydrotris(oxyethylene) lauryl Na phosphate [68935-84-2] were chloriodinated.

IT 14960-11-3  
(chloriodination of, in production of bactericidal detergents)  
RN 14960-11-3 HCAPLUS  
CN Ethanol, 2-[2-[2-(dodecyloxy)ethoxy]ethoxy]-, hydrogen sulfate (8CI, 9CI) (CA INDEX NAME)

Me-(CH<sub>2</sub>)<sub>11</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

IC C07C031-18  
CC 46-3 (Surface Active Agents and Detergents)  
IT Detergents  
(bactericidal, chloriodinated ionic or nonionic surfactants)  
IT Iodination  
(chloro-, of ionic or nonionic surfactants)  
IT Chlorination  
(iodo-, of ionic or nonionic surfactants)  
IT 27176-87-0  
(bactericidal detergents, containing chloriodinated ionic or nonionic surfactants)  
IT 9016-45-9 14960-11-3 19327-38-9 68935-84-2  
(chloriodination of, in production of bactericidal detergents)

L40 ANSWER 40 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1978:508136 HCAPLUS  
DOCUMENT NUMBER: 89:108136  
TITLE: 1-Methoxyalkyl-2-sulfate useful in washing and cleaning compositions  
INVENTOR(S): Bischoff, Martin; Baumann, Horst; Andree, Hans; Sung, Eric  
PATENT ASSIGNEE(S): Henkel K.-G.a.A., Fed. Rep. Ger.  
SOURCE: Ger. Offen., 16 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE         |
|------------|------|----------|-----------------|--------------|
| DE 2651925 | A1   | 19780518 | DE 1976-2651925 | 1976<br>1113 |
| DE 2651925 | C2   | 19870129 | DE 1976-2651925 | 1976         |

PRIORITY APPLN. INFO.: <--

1113

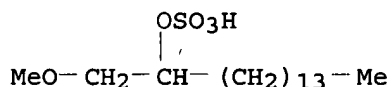
&lt;--

AB MeOCH<sub>2</sub>CHROSO<sub>3</sub>M (M = Na, K, NH<sub>4</sub>, quaternary ammonium cation; R = C<sub>8</sub>-20 alkyl), useful as detergents, were prepared by 2 methods. Thus, e.g., NaOMe in MeOH was treated with a C<sub>15</sub>-18 1,2-epoxyalkane mixture and the mixture refluxed 8 h to give 80% the corresponding 1-methoxy-2-alkanols, which were sulfated with 3% SO<sub>3</sub> in an air stream at 22° 33 min or treated with ClSO<sub>3</sub>H at 12-21° to give 92 or 96% 1-methoxy-2-alkanol sulfates, isolated as the Na salts. The results of Launderometer washing tests showed 76-80% removal of dust and skin oils from soiled wool by the preparation Na 1-methoxy-2-alkanol sulfates vs. 0-71% for comparison samples.

IT 59679-94-6P  
(preparation and detergent activity of)

RN 59679-94-6 HCAPLUS

CN 2-Hexadecanol, 1-methoxy-, hydrogen sulfate, sodium salt (9CI)  
(CA INDEX NAME)

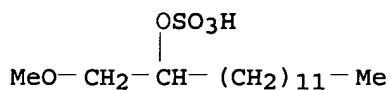


● Na

IT 67217-02-1P 67217-03-2P  
(preparation of)

RN 67217-02-1 HCAPLUS

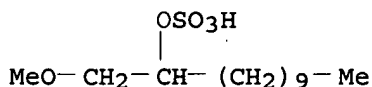
CN 2-Tetradecanol, 1-methoxy-, hydrogen sulfate, sodium salt (9CI)  
(CA INDEX NAME)



● Na

RN 67217-03-2 HCAPLUS

CN 2-Dodecanol, 1-methoxy-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



● Na

IC C07C141-04

CC 23-9 (Aliphatic Compounds)  
 Section cross-reference(s): 46  
 IT 59679-94-6P  
 (preparation and detergent activity of)  
 IT 67217-02-1P 67217-03-2P  
 (preparation of)

L40 ANSWER 41 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1978:136132 HCAPLUS

DOCUMENT NUMBER: 88:136132

TITLE: Neutralization of mixtures of organic sulfuric acids or sulfonic acids and excess sulfating agent, resulting in sodium sulfate

INVENTOR(S): Sagel, John A.; Barton, Brandon Harris

PATENT ASSIGNEE(S): Procter and Gamble Co., USA

SOURCE: Ger. Offen., 34 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.<br>-----       | KIND<br>---- | DATE<br>-----        | APPLICATION NO.<br>----- | DATE              |
|---------------------------|--------------|----------------------|--------------------------|-------------------|
| DE 2729036                | A1           | 19780112             | DE 1977-2729036          | 1977<br>0628      |
| US 4430271                | A            | 19840207             | US 1976-701729           | 1976<br>0701      |
| CA 1104582                | A1           | 19810707             | CA 1977-281123           | 1977<br>0622      |
| ES 460237                 | A1           | 19780816             | ES 1977-460237           | 1977<br>0629      |
| BE 856306                 | A1           | 19771230             | BE 1977-178943           | 1977<br>0630      |
| FR 2356634                | A1           | 19780127             | FR 1977-20101            | 1977<br>0630      |
| FR 2356634<br>JP 53025285 | B1<br>A2     | 19831014<br>19780308 | JP 1977-78441            | 1977<br>0630      |
| PRIORITY APPLN. INFO.:    |              |                      | US 1976-701729           | A<br>1976<br>0701 |

AB Neutralizing sulfonation and sulfation reaction products containing H<sub>2</sub>SO<sub>4</sub> and its monoesters and/or organic sulfonic acids with aqueous NaOH

gave a paste with pH 6-12, which was passed through a countercurrent heat exchanger using water at 15-37.7°. These conditions maintained turbulence of the paste stream and avoided and buildup of Na<sub>2</sub>SO<sub>4</sub> in the heat exchanger.

IT 43168-25-8P  
 (preparation and purification of)  
 RN 43168-25-8 HCAPLUS  
 CN Ethanol, 2-[2-[2-(hexadecyloxy)ethoxy]ethoxy]-, hydrogen sulfate, sodium salt (6CI, 9CI) (CA INDEX NAME)

Me-(CH<sub>2</sub>)<sub>15</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

IC C07C139-00  
 CC 23-8 (Aliphatic Compounds)  
 Section cross-reference(s): 25  
 IT 25155-30-0P 43168-25-8P  
 (preparation and purification of)  
 L40 ANSWER 42 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1978:136131 HCAPLUS  
 DOCUMENT NUMBER: 88:136131  
 TITLE: Neutralization of mixtures of organic sulfuric acids or sulfonic acids and excess sulfating agent, resulting in sodium sulfate  
 INVENTOR(S): Sagel, John A.; Barton, Brandon Harris  
 PATENT ASSIGNEE(S): Procter and Gamble Co., USA  
 SOURCE: Ger. Offen., 35 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE         |
|------------|------|----------|-----------------|--------------|
| DE 2728973 | A1   | 19780112 | DE 1977-2728973 | 1977<br>0628 |
| US 4153625 | A    | 19790508 | US 1976-701724  | 1976<br>0701 |
| CA 1089872 | A1   | 19801118 | CA 1977-281128  | 1977<br>0622 |
| ES 460238  | A1   | 19780816 | ES 1977-460238  | 1977<br>0629 |
| BE 856307  | A1   | 19771230 | BE 1977-178944  | 1977         |

0630

FR 2356635 A1 19780127 FR 1977-20102

1977

0630

FR 2356635 B1 19810710  
JP 53025286 A2 19780308 JP 1977-78442

1977

0630

PRIORITY APPLN. INFO.: US 1976-701724 A

1976

0701

AB Sulfonation and sulfation products, containing H<sub>2</sub>SO<sub>4</sub> and its monoesters and/or organic sulfonic acids, were neutralized with aqueous NaOH to give a watery paste at pH 6-12; the paste was passed through a countercurrent heat exchanger in which the cooling medium entered at 5-100° and flowed through the heat exchanger so as to maintain turbulence in the paste stream and avoid excessive deposition of Na<sub>2</sub>SO<sub>4</sub> in the exchanger.

IT 43168-25-8P

(preparation and purification of)

RN 43168-25-8 HCAPLUS

CN Ethanol, 2-[2-[2-(hexadecyloxy)ethoxy]ethoxy]-, hydrogen sulfate, sodium salt (6CI, 9CI) (CA INDEX NAME)

Me-(CH<sub>2</sub>)<sub>15</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Na

IC C07C139-00

CC 23-8 (Aliphatic Compounds)

Section cross-reference(s): 25

IT 25155-30-0P 43168-25-8P

(preparation and purification of)

L40 ANSWER 43 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1977:541668 HCAPLUS

DOCUMENT NUMBER: 87:141668

TITLE: Ionic **surfactants** applicable in the presence of multivalent cations. Physicochemical properties

AUTHOR(S): Shinoda, Kozo; Hirai, Tsuyoshi

CORPORATE SOURCE: Fac. Eng., Yokohama Natl. Univ., Yokohama, Japan

SOURCE: Journal of Physical Chemistry (1977), 81(19), 1842-5

CODEN: JPCHAX; ISSN: 0022-3654

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Ordinary ionic **surfactants** are salted out and cannot be used in water in the presence of multivalent cations, because they do not dissolve in hard water more than half their saturation concns. of multivalent salts of **surfactants**, i.e., neither

micellization nor solubilization occurs. Ca and Mg salts of surface active anions,  $\text{C}_{12}\text{H}_{25}\text{OCH}_2\text{CH}_2\text{SO}_4 \cdot 0.5\text{Ca}(\text{Mg})$  which can dissolve well in water in the presence of bivalent cations at room temperature were prepared and the physicochem. properties of their aqueous solns. were studied. The critical micelle concentration

(cmc), the solubilizing power for cyclohexane, and the surface tension of aqueous solution above the cmc of  $\text{C}_{12}\text{H}_{25}\text{OCH}_2\text{CH}_2\text{SO}_4 \cdot 0.5\text{Ca}$  were resp. 1/9, 4.7 times larger, and 8 dyn/cm lower than those of Na dodecyl sulfate. A liquid surfactant phase was observed above the Krafft point in the presence of a large amount of bivalent cations or a small amount of trivalent cations. This phenomenon manifests the continuous change from micelle (pseudo phase) to liquid surfactant phase (true phase), i.e., from finite to infinite aggregation supporting the pseudo-phase separation model of micellar solution

IT 3088-31-1 13150-00-0 41343-91-3  
41343-92-4 54717-42-9 60484-04-0  
63596-52-1 63596-53-2 63596-54-3

(Krafft point of)

RN 3088-31-1 HCAPLUS

CN Ethanol, 2-[2-(dodecyloxy)ethoxy]-, hydrogen sulfate, sodium salt  
(7CI, 8CI, 9CI) (CA INDEX NAME)

$\text{Me}-(\text{CH}_2)_{11}-\text{O}-\text{CH}_2-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}_2-\text{OSO}_3\text{H}$

● Na

RN 13150-00-0 HCAPLUS

CN Ethanol, 2-[2-[2-(dodecyloxy)ethoxy]ethoxy]-, hydrogen sulfate,  
sodium salt (7CI, 8CI, 9CI) (CA INDEX NAME)

$\text{Me}-(\text{CH}_2)_{11}-\text{O}-\text{CH}_2-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}_2-\text{OSO}_3\text{H}$

● Na

RN 41343-91-3 HCAPLUS

CN Ethanol, 2-(dodecyloxy)-, hydrogen sulfate, calcium salt (9CI)  
(CA INDEX NAME)

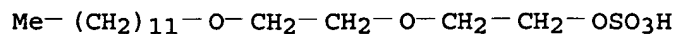
$\text{Me}-(\text{CH}_2)_{11}-\text{O}-\text{CH}_2-\text{CH}_2-\text{OSO}_3\text{H}$

● 1/2 Ca

RN 41343-92-4 HCAPLUS

CN Ethanol, 2-[2-(dodecyloxy)ethoxy]-, hydrogen sulfate, calcium salt  
(9CI) (CA INDEX NAME)

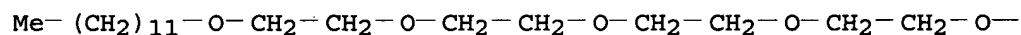




● 1/2 Ca

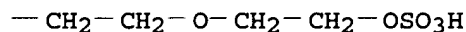
RN 54717-42-9 HCAPLUS  
CN 3,6,9,12,15,18-Hexaoxatriacontan-1-ol, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



● Na

PAGE 1-B

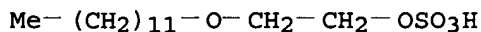


RN 60484-04-0 HCAPLUS  
CN Ethanol, 2-[2-(dodecyloxy)ethoxy]-, hydrogen sulfate, magnesium salt (9CI) (CA INDEX NAME)



● 1/2 Mg

RN 63596-52-1 HCAPLUS  
CN Ethanol, 2-(dodecyloxy)-, hydrogen sulfate, magnesium salt (9CI) (CA INDEX NAME)



● 1/2 Mg

RN 63596-53-2 HCAPLUS  
CN Ethanol, 2-(dodecyloxy)-, hydrogen sulfate, potassium salt (9CI) (CA INDEX NAME)

Me- (CH<sub>2</sub>)<sub>11</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● K

RN 63596-54-3 HCAPLUS  
CN Ethanol, 2-(dodecyloxy)-, hydrogen sulfate, lithium salt (9CI)  
(CA INDEX NAME)

Me- (CH<sub>2</sub>)<sub>11</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● Li

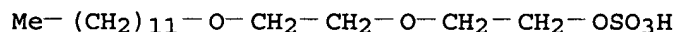
IT 63596-55-4P  
(preparation of)  
RN 63596-55-4 HCAPLUS  
CN Ethanol, 2-(dodecyloxy)-, hydrogen sulfate, manganese(2+) salt  
(9CI) (CA INDEX NAME)

Me- (CH<sub>2</sub>)<sub>11</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OSO<sub>3</sub>H

● 1/2 Mn(II)

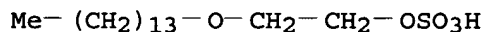
CC 66-2 (Surface Chemistry and Colloids)  
Section cross-reference(s): 46  
ST ionic **surfactant** applicable hard water; micellization  
multivalent cation effect; Krafft point hard water  
**surfactant**; dodecyl polyoxyethylenesulfonate  
**surfactant**  
IT Krafft point  
(of dodecyl polyoxyethylene sulfate ionic **surfactants**  
)  
IT **Surfactants**  
(ionic, dodecyl polyoxyethylene sulfates, for hard water)  
IT 3088-31-1 13150-00-0 41343-91-3  
41343-92-4 54717-42-9 56049-86-6  
60484-04-0 63596-52-1 63596-53-2  
63596-54-3  
(Krafft point of)  
IT 63596-55-4P  
(preparation of)  
  
L40 ANSWER 44 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1975:74811 HCAPLUS  
DOCUMENT NUMBER: 82:74811  
TITLE: **Surfactance** of sulfated sodium salts  
of saturated long chain fatty alcohols and of  
their monoethers with ethylene glycol and  
diethylene glycol

AUTHOR(S): Kailasam, S.; Subrahmanyam, V. V. R.  
CORPORATE SOURCE: Dep. Chem. Technol., Univ. Bombay, Bombay,  
India  
SOURCE: Journal of the Oil Technologists' Association  
of India (Mumbai, India) (1974),  
6(3), 55-9  
CODEN: JOTIAC; ISSN: 0970-4094  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Lauryl, myristyl, palmityl, and stearyl alcs. and their monoethers  
with ethylene and diethylene glycols were sulfated, neutralized  
with NaOH solution, and added (10%) to soaps, improving the  
performance of the soaps in hard water. The improvement was less  
than that reported for **surfactants prepared**  
similarly from lauric, myristic, palmitic, and stearic acids and  
the two diols.  
IT 3088-31-1 3694-74-4 14858-54-9  
14858-55-0 14858-61-8 14858-62-9  
15826-16-1 26482-91-7  
(surface activity of, as soap additive)  
RN 3088-31-1 HCAPLUS  
CN Ethanol, 2-[2-(dodecyloxy)ethoxy]-, hydrogen sulfate, sodium salt  
(7CI, 8CI, 9CI) (CA INDEX NAME)



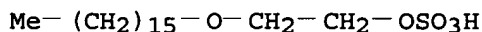
● Na

RN 3694-74-4 HCAPLUS  
CN Ethanol, 2-(tetradecyloxy)-, hydrogen sulfate, sodium salt (7CI,  
8CI, 9CI) (CA INDEX NAME)



● Na

RN 14858-54-9 HCAPLUS  
CN Ethanol, 2-(hexadecyloxy)-, hydrogen sulfate, sodium salt (6CI,  
8CI, 9CI) (CA INDEX NAME)



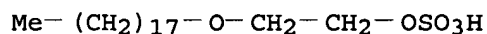
● Na

RN 14858-55-0 HCAPLUS  
CN Ethanol, 2-[2-(hexadecyloxy)ethoxy]-, hydrogen sulfate, sodium  
salt (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



● Na

RN 14858-61-8 HCAPLUS  
 CN Ethanol, 2-(octadecyloxy)-, hydrogen sulfate, sodium salt (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



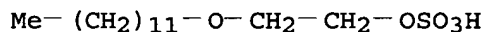
● Na

RN 14858-62-9 HCAPLUS  
 CN Ethanol, 2-[2-(octadecyloxy)ethoxy]-, hydrogen sulfate, sodium salt (6CI, 8CI, 9CI) (CA INDEX NAME)



● Na

RN 15826-16-1 HCAPLUS  
 CN Ethanol, 2-(dodecyloxy)-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 26482-91-7 HCAPLUS  
 CN Ethanol, 2-[2-(tetradecyloxy)ethoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



● Na

CC 46-3 (Surface Active Agents and Detergents)  
 IT **Surfactants**  
 (sulfates of alcs. and ethoxylated alcs., as lime soap dispersants)

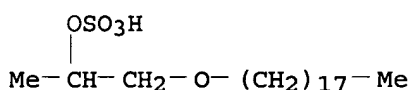
IT 151-21-3, properties 1120-01-0 1120-04-3 1191-50-0  
 3088-31-1 3694-74-4 14858-54-9  
 14858-55-0 14858-61-8 14858-62-9  
 15826-16-1 26482-91-7  
 (surface activity of, as soap additive)

L40 ANSWER 45 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1971:100890 HCAPLUS  
 DOCUMENT NUMBER: 74:100890  
 TITLE: Sulfated diglycolamides  
 AUTHOR(S): Weil, James K.; Parris, N.; Stirton, Alexander J.  
 CORPORATE SOURCE: East. Reg. Res. Lab., Agric. Res. Serv.,  
 Philadelphia, PA, USA  
 SOURCE: Journal of the American Oil Chemists' Society  
 (1971), 48(1), 35-7  
 CODEN: JAOCA7; ISSN: 0003-021X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Pure sulfated diglycolamides are prepared by sulfation of products from the alkali-catalyzed reaction of diglycolamide with fatty Me esters. Products containing 70% Me-substituted diglycolamides were obtained by addition of 1 mole of propylene oxide to a mole of hydroxyethylamide under alkaline catalysis. Sulfated monooxypropylated hydroxyethylstearamide, C17H35CONHC2H4OCH2CH(CH3)OSO3Na, and sulfated diglycolstearamide, C17H35CONH(C2H4O)2-SO3Na, have good solubility, lime-soap dispersing power, and detergency.

IT 14858-63-0P  
 (preparation of)  
 RN 14858-63-0 HCAPLUS  
 CN 2-Propanol, 1-(octadecyloxy)-, hydrogen sulfate, sodium salt (9CI)  
 (CA INDEX NAME)



● Na

CC 46 (Surface Active Agents and Detergents)

IT 14351-59-8P 14351-60-1P 14858-63-0P 20138-27-6P  
 20138-28-7P 20429-33-8P 26535-49-9P 32338-76-4P  
 32368-60-8P 32368-61-9P 32368-62-0P 32368-63-1P  
 32368-64-2P 32425-87-9P 32466-47-0P  
 (preparation of)

L40 ANSWER 46 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1971:14392 HCAPLUS  
 DOCUMENT NUMBER: 74:14392  
 TITLE: Synthesis and surface active properties of  
 long-chain ether alcohol sulfates  
 R(OCH2CHR')iOSO3Na  
 AUTHOR(S): Weil, James K.; Stirton, Alexander J.;  
 Wrigley, A. N.  
 CORPORATE SOURCE: East. Reg. Res. Lab., U. S. Dep. Agric.,

SOURCE: Philadelphia, PA, USA  
 Chim. Phys. Appl. Prat. Ag. Surface, C. R.  
 Congr. Int. Deterg., 5th (1969),  
 Meeting Date 1968, Volume 1, 45-50. Ediciones  
 Unidas, S. A.: Barcelona, Spain.  
 CODEN: 22LKAT

DOCUMENT TYPE: Conference

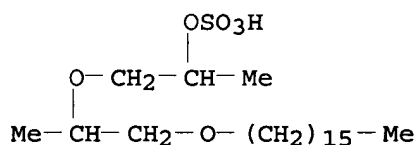
LANGUAGE: English

AB Purified ether alc. sulfates were prepared by the sulfation of the separated reaction products of ethylene, propylene and 1,2-butylene oxides with 12, 14, 16 and 18 C normal primary alcs. The effect of structure on critical micelle concentration, Krafft point, surface tension and lime soap dispersing power was investigated. The effect of oxyalkyl groups in reducing critical micelle concentration and increasing Krafft point was expressed in terms of an equivalent number of methylene groups.

IT 14858-57-2P  
 (preparation of)

RN 14858-57-2 HCAPLUS

CN 2-Propanol, 1-[2-(hexadecyloxy)-1-methylethoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



● Na

CC 46 (Surface Active Agents and Detergents)

IT 14858-57-2P  
 (preparation of)

L40 ANSWER 47 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1970:102089 HCAPLUS

DOCUMENT NUMBER: 72:102089

TITLE: **Synthesis** and properties of sulfated alkanolamides

AUTHOR(S): Weil, James K.; Parris, N.; Stirton, Alexander J.

CORPORATE SOURCE: Eastern Reg. Res. Lab., Philadelphia, PA, USA

SOURCE: Journal of the American Oil Chemists' Society  
 (1970), 47(3), 91-3  
 CODEN: JAOCA7; ISSN: 0003-021X

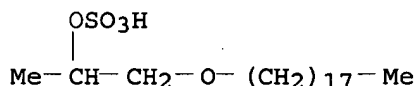
DOCUMENT TYPE: Journal

LANGUAGE: English

AB High-purity alkanolamides were prepared by the Na-catalyzed reaction of Me stearate, Me palmitate and Me laurate with ethanolamine, 2-hydroxypropylamine, 3-hydroxypropylamine and N-methyl-N-hydroxyethylamine. The effect of structure on the surface active properties of the sulfation products was investigated. Stability studies showed that sulfated N-methyl-N-hydroxyethylstearamide hydrolyzed rapidly by first order kinetics in acid or base. Sulfated hydroxyalkyl primary amides hydrolyzed slower in basic media following second order

kinetics. Me groups attached to the N atom or to C in the short aliphatic chain improved solubility but had little effect on critical micelle concentration. The alkanolamides of palmitic and stearic acids were good detergents and lime soap dispersing agents.

IT 14858-63-0  
     (surface-active)  
 RN 14858-63-0 HCAPLUS  
 CN 2-Propanol, 1-(octadecyloxy)-, hydrogen sulfate, sodium salt (9CI)  
     (CA INDEX NAME)



● Na

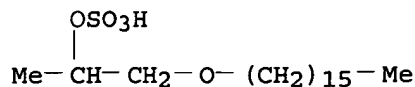
CC 46 (Surface Active Agents and Detergents)  
 ST amide hydroxyalkyl; alkanolamide surfactant  
 IT 142-86-9 151-21-3, properties 14351-59-8 14858-63-0  
 26535-42-2 26535-44-4 26535-45-5 26535-46-6 26535-47-7  
 26535-48-8 26535-49-9 26535-50-2 26574-43-6 26577-87-7  
     (surface-active)

L40 ANSWER 48 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1968:42943 HCAPLUS  
 DOCUMENT NUMBER: 68:42943  
 TITLE: Metabolism of some anionic tallow-based  
           detergents by sewage microorganisms  
 AUTHOR(S): Cordon, Theone C.; Maurer, Elmer W.;  
             Nunez-Ponzoa, M. V.; Stirton, Alexander J.  
 CORPORATE SOURCE: Eastern Regional Res. Lab., Agr. Res. Serv.,  
                     Philadelphia, PA, USA  
 SOURCE: Applied Microbiology (1968), 16(1),  
           48-52  
           CODEN: APMBAY; ISSN: 0003-6919  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

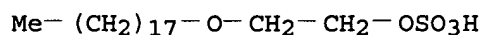
AB A method in which the test detergent was the sole source of carbon was used to study the metabolism of several tallow-based detergents. These were tallow alc. sulfates, long-chain ether alc. sulfates, and esters of  $\alpha$ -sulfo fatty acids. Na p-(1-methylundecyl)benzenesulfonate (LAS) was used as a reference material. The alc. sulfates were the most rapidly and completely metabolized (96-9%), and ether alc. sulfate was 94% degraded. The other compds. were metabolized to the extent of 61-87%; LAS was 80% degraded. Except for the alc. sulfates, loss of methylene blue activity (M.B.A.) occurred long before the chemical O demand (C.O.D.) values had reached a min.; with the alcohol sulfates, M.B.A. and C.O.D. decreased simultaneously.

IT 14858-56-1P 14858-61-8P  
     (preparation of)  
 RN 14858-56-1 HCAPLUS  
 CN 2-Propanol, 1-(hexadecyloxy)-, hydrogen sulfate, sodium salt (9CI)  
     (CA INDEX NAME)



● Na

RN 14858-61-8 HCAPLUS  
 CN Ethanol, 2-(octadecyloxy)-, hydrogen sulfate, sodium salt (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



● Na

CC 60 (Sewage and Wastes)  
 IT 1847-55-8P 3076-28-6P 14858-56-1P 14858-61-8P  
 (preparation of)

L40 ANSWER 49 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1967:473144 HCAPLUS  
 DOCUMENT NUMBER: 67:73144  
 TITLE: Alkyl sulfates  
 INVENTOR(S): Blood, Alden E.; Heller, James D.  
 PATENT ASSIGNEE(S): Eastman Kodak Co.  
 SOURCE: Fr., 9 pp.  
 CODEN: FRXXAK  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE         |
|------------|------|----------|-----------------|--------------|
| FR 1462888 |      | 19661216 | FR              |              |
| DE 1568436 |      |          | DE              |              |
| GB 1091455 |      |          | GB              |              |
| US 3409657 |      | 19681105 | US 1965-424182  | 1965<br>0108 |

PRIORITY APPLN. INFO.:

US

1965  
0108

AB The title compds. Me<sub>2</sub>CHCH(OSO<sub>3</sub>X)CMe<sub>2</sub>CH<sub>2</sub>OR (I) are prepared by sulfonating the corresponding hydroxy- (II) or alkoxy- (III) compds. Thus, 174 g. ethoxytrimethylpentanol and 250 ml. iso-C<sub>5</sub>H<sub>12</sub> is cooled to 3°, 121 g. SO<sub>2</sub>Cl<sub>2</sub> introduced slowly in a N atmospheric, and swept with N 30 min. to eliminate HCl. The mixture is neutralized with 400 g. 10% aqueous NaOH, then slowly with 50.6 g. 20% aqueous NaOH, and finally 30 g. 20% aqueous Na<sub>2</sub>CO<sub>3</sub>. The iso-C<sub>5</sub>H<sub>12</sub> is



separated, the aqueous solution is extracted with petroleum ether and the extract

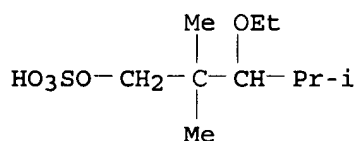
distilled to give 42% Na 1- or 3-ethoxytrimethylpentyl sulfate. Also prepared were 38% Na isobutoxytrimethylpentyl sulfate, 22% Na 2-methylpentoxytrimethylpentyl sulfate, 69.2% Na 2-ethylhexyloxytrimethylpentyl sulfate, and Na decyloxytrimethylpentyl sulfate. The intermediate II and III are prepared by reducing the corresponding dioxanes. For example, 200 g. 2,4-diisopropyl-5,5-dimethyl-1,3-dioxane and 20 g. of a pulverized catalyst containing 5% Pd on Al is hydrogenated at 225°/35 megaponds (absolute) 4 hrs. to give 3-isobutoxy-2,2,4-trimethylpentan-1-ol and 1-isobutoxy-2,2,4-trimethylpentan-3-ol, b. 226-32°. The pentanols are separated by distillation through a Oldershaw column to give 3-pentanol, b15 106-10°; 1-pentanol, b15 116-20°. The wetting properties of these penetrating agents are tabulated.

IT 17013-81-9P 17013-82-0P 17013-83-1P  
17013-84-2P 17013-85-3P 17013-86-4P  
17013-87-5P 17013-88-6P 17013-89-7P  
17048-99-6P

(preparation of)

RN 17013-81-9 HCAPLUS

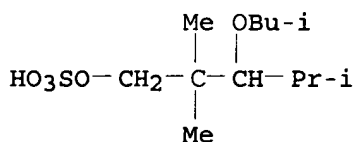
CN 1-Pentanol, 3-ethoxy-2,2,4-trimethyl-, hydrogen sulfate, sodium salt (8CI) (CA INDEX NAME)



● Na

RN 17013-82-0 HCAPLUS

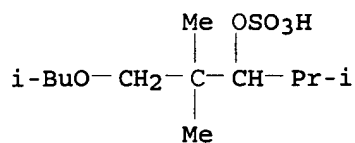
CN 1-Pentanol, 3-isobutoxy-2,2,4-trimethyl-, hydrogen sulfate, sodium salt (8CI) (CA INDEX NAME)



● Na

RN 17013-83-1 HCAPLUS

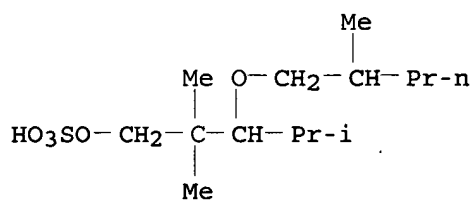
CN 3-Pentanol, 1-isobutoxy-2,2,4-trimethyl-, hydrogen sulfate, sodium salt (8CI) (CA INDEX NAME)



● Na

RN 17013-84-2 HCAPLUS

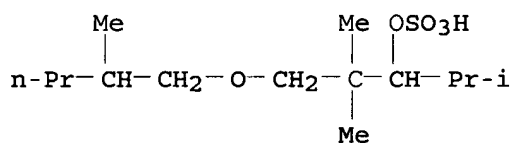
CN 1-Pentanol, 2,2,4-trimethyl-3-[(2-methylpentyl)oxy]-, hydrogen sulfate, sodium salt (8CI) (CA INDEX NAME)



● Na

RN 17013-85-3 HCAPLUS

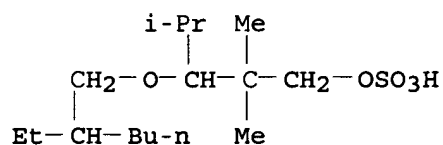
CN 3-Pentanol, 2,2,4-trimethyl-1-[(2-methylpentyl)oxy]-, hydrogen sulfate, sodium salt (8CI) (CA INDEX NAME)



● Na

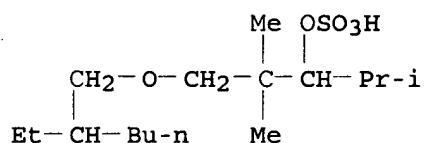
RN 17013-86-4 HCAPLUS

CN 1-Pentanol, 3-[(2-ethylhexyl)oxy]-2,2,4-trimethyl-, hydrogen sulfate, sodium salt (8CI) (CA INDEX NAME)



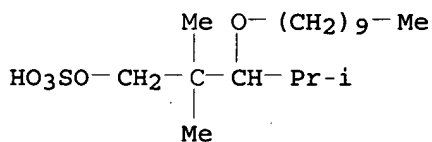
● Na

RN 17013-87-5 HCAPLUS  
 CN 3-Pentanol, 1-[(2-ethylhexyl)oxy]-2,2,4-trimethyl-, hydrogen sulfate, sodium salt (8CI) (CA INDEX NAME)



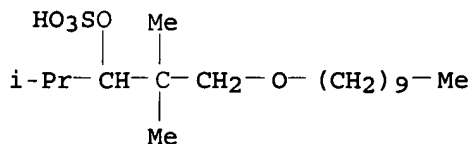
● Na

RN 17013-88-6 HCAPLUS  
 CN 1-Pentanol, 3-(decyloxy)-2,2,4-trimethyl-, hydrogen sulfate, sodium salt (8CI) (CA INDEX NAME)



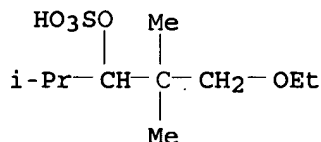
● Na

RN 17013-89-7 HCAPLUS  
 CN 3-Pentanol, 1-(decyloxy)-2,2,4-trimethyl-, hydrogen sulfate, sodium salt (8CI) (CA INDEX NAME)



● Na

RN 17048-99-6 HCAPLUS  
 CN 3-Pentanol, 1-ethoxy-2,2,4-trimethyl-, hydrogen sulfate, sodium salt (8CI) (CA INDEX NAME)



● Na

IC C07C; C11D  
 CC 23 (Aliphatic Compounds)  
 IT 17013-81-9P 17013-82-0P 17013-83-1P  
 17013-84-2P 17013-85-3P 17013-86-4P  
 17013-87-5P 17013-88-6P 17013-89-7P  
 17048-99-6P  
 (preparation of)

L40 ANSWER 50 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1967:57023 HCAPLUS

DOCUMENT NUMBER: 66:57023

TITLE: Ether alcohol sulfates. Effect of oxypropylation and oxybutylation on surface-active properties

AUTHOR(S): Weil, James K.; Stirton, Alexander J.; Nunez-Ponzoa, M. V.

CORPORATE SOURCE: Eastern Regional Res. Lab., Philadelphia, PA, USA

SOURCE: Journal of the American Oil Chemists' Society (1966), 43(11), 603-6

CODEN: JAOCA7; ISSN: 0003-021X

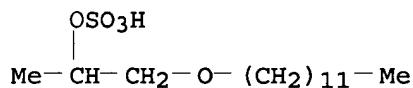
DOCUMENT TYPE: Journal

LANGUAGE: English

AB The reaction products of 1,2-butylene oxide (I) with C12-18 alcs. were compared with those from the propylene oxide (II) reaction. A 60% yield of the 1st derivative was obtained for the I reaction, compared with a maximum yield of 50% for the II reaction. First and 2nd derivs. were fractionally distilled from the reaction mixts. and characterized as pure ether alcs. and their acetates. Sulfates of the pure ether alcs. had slightly greater soly . than those of II, and both reactions were more effective than oxyethylation. Dioxyalkylated products had lower Krafft points than monoxyalkylated products. A low degree of oxyalkylation had only minor effects on the detergency of alc. sulfates, but polyoxybutylation caused significant redns. in foam height for the C16-18 alc. sulfates. Critical micelle concentration was reduced both by an increasing degree of oxyalkylation and mol. weight of epoxide. All of the ether alc. sulfates were effective limesoap dispersing agents. 11 references.

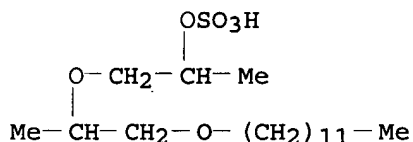
IT 14858-45-8, 2-Propanol, 1-(dodecyloxy)-, hydrogen sulfate sodium salt 14858-46-9, 2-Propanol, 1-[2-(dodecyloxy)-1-methylethoxy]-, hydrogen sulfate sodium salt 14858-47-0, 2-Butanol, 1-(dodecyloxy)-, hydrogen sulfate, sodium salt 14858-48-1, 2-Butanol, 1-[1-[(dodecyloxy)methyl]propoxy]-,

hydrogen sulfate, sodium salt 14858-50-5, 2-Propanol,  
 1-(tetradecyloxy)-, hydrogen sulfate sodium salt  
 14858-51-6, 2-Propanol, 1-[1-methyl-2-  
 (tetradecyloxy)ethoxy]-, hydrogen sulfate sodium salt  
 14858-52-7, 2-Butanol, 1-(tetradecyloxy)-, hydrogen  
 sulfate, sodium salt 14858-54-9 14858-55-0,  
 Ethanol, 2-[2-(hexadecyloxy)ethoxy]-, hydrogen sulfate sodium salt  
 14858-56-1 14858-57-2, 2-Propanol,  
 1-[2-(hexadecyloxy)-1-methylethoxy]-, hydrogen sulfate sodium salt  
 14858-58-3 14858-59-4 14858-61-8  
 14858-62-9 14858-63-0, 2-Propanol,  
 1-(octadecyloxy)-, hydrogen sulfate sodium salt 14858-64-1  
 14858-65-2 14858-66-3, 2-Butanol,  
 1-[1-[(octadecyloxy)methyl]propoxy]-, hydrogen sulfate, sodium  
 salt 30862-56-7, 2-Butanol, 1-[1-  
 [(tetradecyloxy)methyl]propoxy]-, hydrogen sulfate, sodium salt  
 (surface-active)  
 RN 14858-45-8 HCAPLUS  
 CN 2-Propanol, 1-(dodecyloxy)-, hydrogen sulfate, sodium salt (9CI)  
 (CA INDEX NAME)



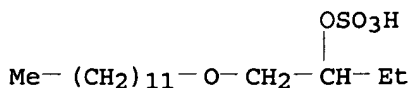
● Na

RN 14858-46-9 HCAPLUS  
 CN 2-Propanol, 1-[2-(dodecyloxy)-1-methylethoxy]-, hydrogen sulfate,  
 sodium salt (9CI) (CA INDEX NAME)



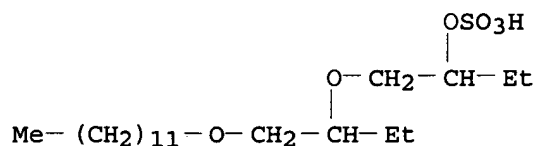
● Na

RN 14858-47-0 HCAPLUS  
 CN 2-Butanol, 1-(dodecyloxy)-, hydrogen sulfate, sodium salt (9CI)  
 (CA INDEX NAME)



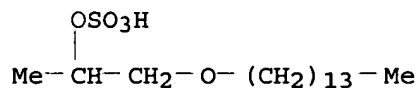
● Na

RN 14858-48-1 HCAPLUS  
 CN 2-Butanol, 1-[1-[(dodecyloxy)methyl]propoxy]-, hydrogen sulfate,  
 sodium salt (9CI) (CA INDEX NAME)



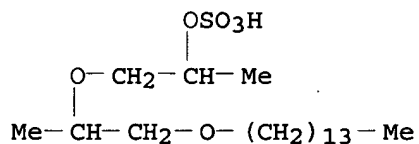
● Na

RN 14858-50-5 HCAPLUS  
 CN 2-Propanol, 1-(tetradecyloxy)-, hydrogen sulfate, sodium salt  
 (9CI) (CA INDEX NAME)



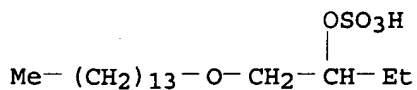
● Na

RN 14858-51-6 HCAPLUS  
 CN 2-Propanol, 1-[1-methyl-2-(tetradecyloxy)ethoxy]-, hydrogen  
 sulfate, sodium salt (9CI) (CA INDEX NAME)



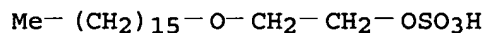
● Na

RN 14858-52-7 HCAPLUS  
 CN 2-Butanol, 1-(tetradecyloxy)-, hydrogen sulfate, sodium salt (9CI)  
 (CA INDEX NAME)



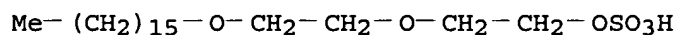
● Na

RN 14858-54-9 HCAPLUS  
 CN Ethanol, 2-(hexadecyloxy)-, hydrogen sulfate, sodium salt (6CI, 8CI, 9CI) (CA INDEX NAME)



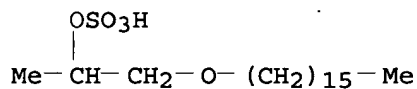
● Na

RN 14858-55-0 HCAPLUS  
 CN Ethanol, 2-[2-(hexadecyloxy)ethoxy]-, hydrogen sulfate, sodium salt (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



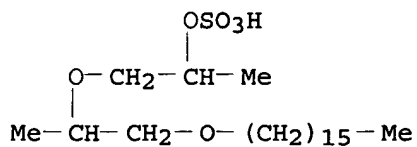
● Na

RN 14858-56-1 HCAPLUS  
 CN 2-Propanol, 1-(hexadecyloxy)-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



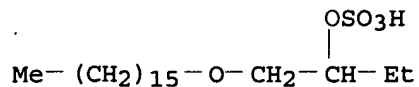
● Na

RN 14858-57-2 HCAPLUS  
 CN 2-Propanol, 1-[2-(hexadecyloxy)-1-methylethoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



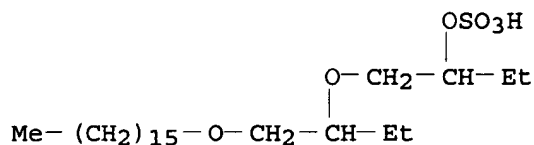
● Na

RN 14858-58-3 HCAPLUS  
 CN 2-Butanol, 1-(hexadecyloxy)-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



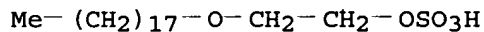
● Na

RN 14858-59-4 HCAPLUS  
 CN 2-Butanol, 1-[1-[(hexadecyloxy)methyl]propoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 14858-61-8 HCAPLUS  
 CN Ethanol, 2-(octadecyloxy)-, hydrogen sulfate, sodium salt (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



● Na

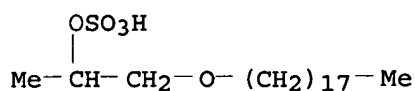
RN 14858-62-9 HCAPLUS  
 CN Ethanol, 2-[2-(octadecyloxy)ethoxy]-, hydrogen sulfate, sodium salt (6CI, 8CI, 9CI) (CA INDEX NAME)



● Na

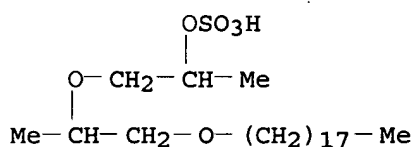
RN 14858-63-0 HCAPLUS  
 CN 2-Propanol, 1-(octadecyloxy)-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)





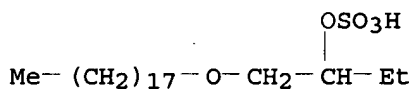
● Na

RN 14858-64-1 HCAPLUS  
 CN 2-Propanol, 1-[1-methyl-2-(octadecyloxy)ethoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



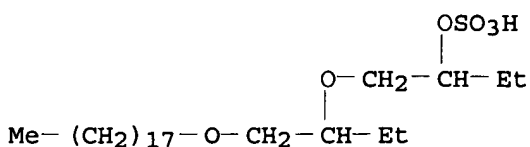
● Na

RN 14858-65-2 HCAPLUS  
 CN 2-Butanol, 1-(octadecyloxy)-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



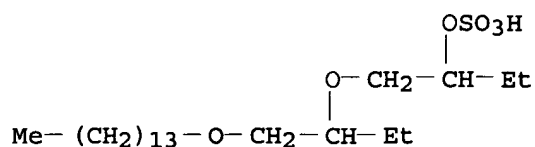
● Na

RN 14858-66-3 HCAPLUS  
 CN 2-Butanol, 1-[1-[(octadecyloxy)methyl]propoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 30862-56-7 HCAPLUS  
 CN 2-Butanol, 1-[1-[(tetradecyloxy)methyl]propoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)



● Na

- CC 46 (Surface Active Agents and Detergents)
- IT **Surfactants**, properties  
(ether alc. sulfates as)
- IT Alcohols, compounds  
(reaction products with 1,2-epoxybutane or propylene oxide, sulfated, sodium salts, surface-active)
- IT 2-Butanol, 1-[1-[(octadecyloxy)methyl]propoxy]-, acetate  
(preparation of)
- IT 14858-34-5P, 2-Butanol, 1-[1-[(hexadecyloxy)methyl]propoxy]-  
14858-35-6P, 2-Butanol, 1-(octadecyloxy)- 14858-36-7P  
14858-37-8P, 2-Butanol, 1-(dodecyloxy)-, acetate 14858-38-9P  
14858-39-0P, 2-Butanol, 1-(tetradecyloxy)-, acetate 14858-40-3P  
14858-41-4P, 2-Butanol, 1-(hexadecyloxy)-, acetate 14858-42-5P,  
2-Butanol, 1-[1-[(hexadecyloxy)methyl]propoxy]-, acetate  
14858-43-6P, 2-Butanol, 1-(octadecyloxy)-, acetate 14863-64-0P  
14863-65-1P 14863-66-2P, 2-Butanol, 1-[1-  
[(tetradecyloxy)methyl]propoxy]- 14863-67-3P, 2-Butanol,  
1-(hexadecyloxy)- 14960-27-1P  
(preparation of)
- IT 75-56-9, Propylene oxide 106-88-7  
(reaction products with fatty alcs., sulfated, sodium salts, surface-active)
- IT 14858-45-8, 2-Propanol, 1-(dodecyloxy)-, hydrogen sulfate  
sodium salt 14858-46-9, 2-Propanol, 1-[2-(dodecyloxy)-1-  
methylethoxy]-, hydrogen sulfate sodium salt 14858-47-0,  
2-Butanol, 1-(dodecyloxy)-, hydrogen sulfate, sodium salt  
14858-48-1, 2-Butanol, 1-[1-[(dodecyloxy)methyl]propoxy]-,  
hydrogen sulfate, sodium salt 14858-50-5, 2-Propanol,  
1-(tetradecyloxy)-, hydrogen sulfate sodium salt  
14858-51-6, 2-Propanol, 1-[1-methyl-2-  
(tetradecyloxy)ethoxy]-, hydrogen sulfate sodium salt  
14858-52-7, 2-Butanol, 1-(tetradecyloxy)-, hydrogen  
sulfate, sodium salt 14858-54-9 14858-55-0,  
Ethanol, 2-[2-(hexadecyloxy)ethoxy]-, hydrogen sulfate sodium salt  
14858-56-1 14858-57-2, 2-Propanol,  
1-[2-(hexadecyloxy)-1-methylethoxy]-, hydrogen sulfate sodium salt  
14858-58-3 14858-59-4 14858-61-8  
14858-62-9 14858-63-0, 2-Propanol,  
1-(octadecyloxy)-, hydrogen sulfate sodium salt 14858-64-1  
14858-65-2 14858-66-3, 2-Butanol,  
1-[1-[(octadecyloxy)methyl]propoxy]-, hydrogen sulfate, sodium  
salt 30862-56-7, 2-Butanol, 1-[1-  
[(tetradecyloxy)methyl]propoxy]-, hydrogen sulfate, sodium salt  
(surface-active)